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■ Round Table: what architect-builder teamwork can mean to you – page 150

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Teamwork makes a best seller of a \$7,000 house – page 156

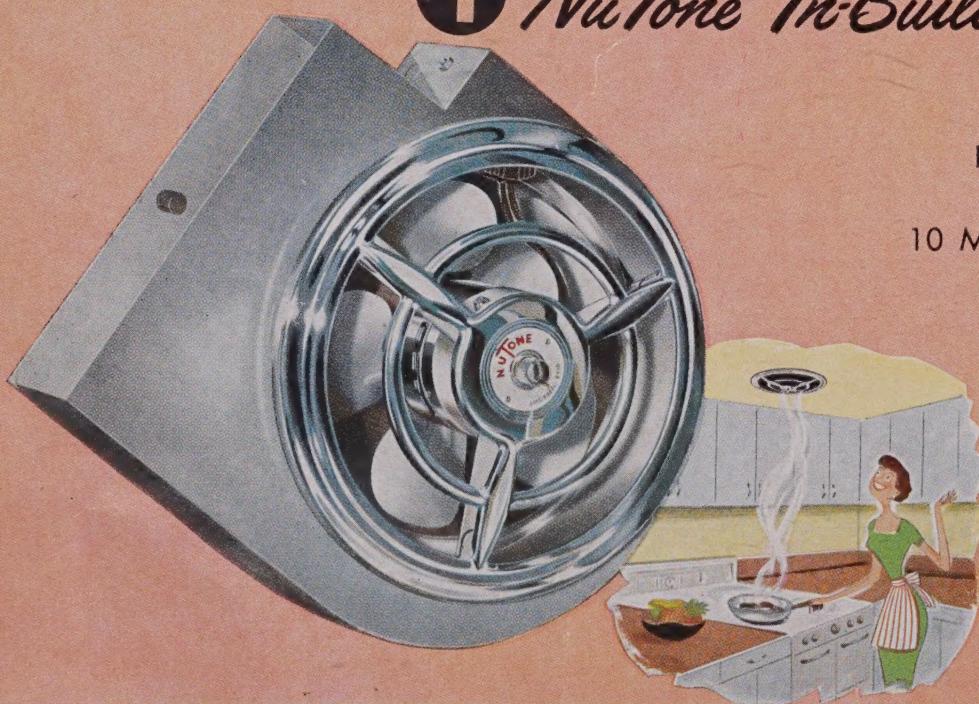
How a Midwestern lumber dealer profits from components – page 160

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ROUNDUP

Will Frank Meistrell replace Al Cole as HHFA chief?

Washington pundits are betting even money that HHFAAdministrator Albert M. Cole will shift to another job before the end of summer. Likeliest successor: Frank J. Meistrell, 52-year-old Wall St. lawyer who has been deputy HHFAAdministrator since last September.

KEEP YOUR EYE ON: Fred Babcock, who wrote FHA's original MPRs 23 years ago, then became FHA's first asst. FHA commissioner in charge of underwriting. He thinks it is time now to overhaul MPRs completely. Reason: when they were written, housing standards were so low he assumed most houses would be bad. Now, the industry has raised its standards so much that a new approach is in order. If he should say so publicly, it should carry great weight with FHA underwriters and the industry. Babcock is a widely respected realty appraiser and Washington consultant.



Mortgage money will tighten drastically in the wake of the Federal Reserve's new boost in the rediscount rate. That means discounts on FHA and VA loans will go up sharply, though perhaps not right away. The Fed faced a quandary over home building. The nation's economy is booming so much that the Fed felt credit tightening was a must to prevent inflation. Yet Fed officials realize that the government's general money controls may hit mortgage lending hard: it is uniquely sensitive to yield. (See p. 63).

FHA is considering whether to increase allowable builders' fee for Sec. 207 rental housing. It figures the present 10% ceiling (which includes architect's fees) is one reason only 4,316 units of FHA rental housing were insured under Sec. 207 in 1955 compared to 11,442 in 1954.

WASHINGTON INSIDE: BLS is about to change its formula for translating monthly housing starts into "seasonally adjusted" annual totals. One version is that the first three months of the year will be de-emphasized. This would have the politically potent effect of minimizing the apparent drop in the pace of home building (see p. 59). Says one expert: "Something is screwy when March has been lower than February on BLS' seasonally adjusted basis in four of the last five years."

FHA rebuts builder claim that MPR changes hike costs

Some FHA officials are burned up at home builders for asserting that increasing minimum property requirements are helping price new houses out of the mass market. There have been 55 changes in MPRs in the last five years. FHA cost estimators figure these would add \$500 to the cost of a typical house, but subtract \$1,400. Of course, not all of the items involved could be applied to the same house.

Public Houser Ernie Bohn of Cleveland (who is also a director of the Second Fed S&L Assn.) thinks Congress should pass a law to let S&Ls adopt split-level interest rates—as many a New York mutual savings bank has already done. Idea is to reward long term savers with, say, $\frac{1}{2}\%$ higher interest on deposits a year or more old.



THIS MONTH'S NEWS

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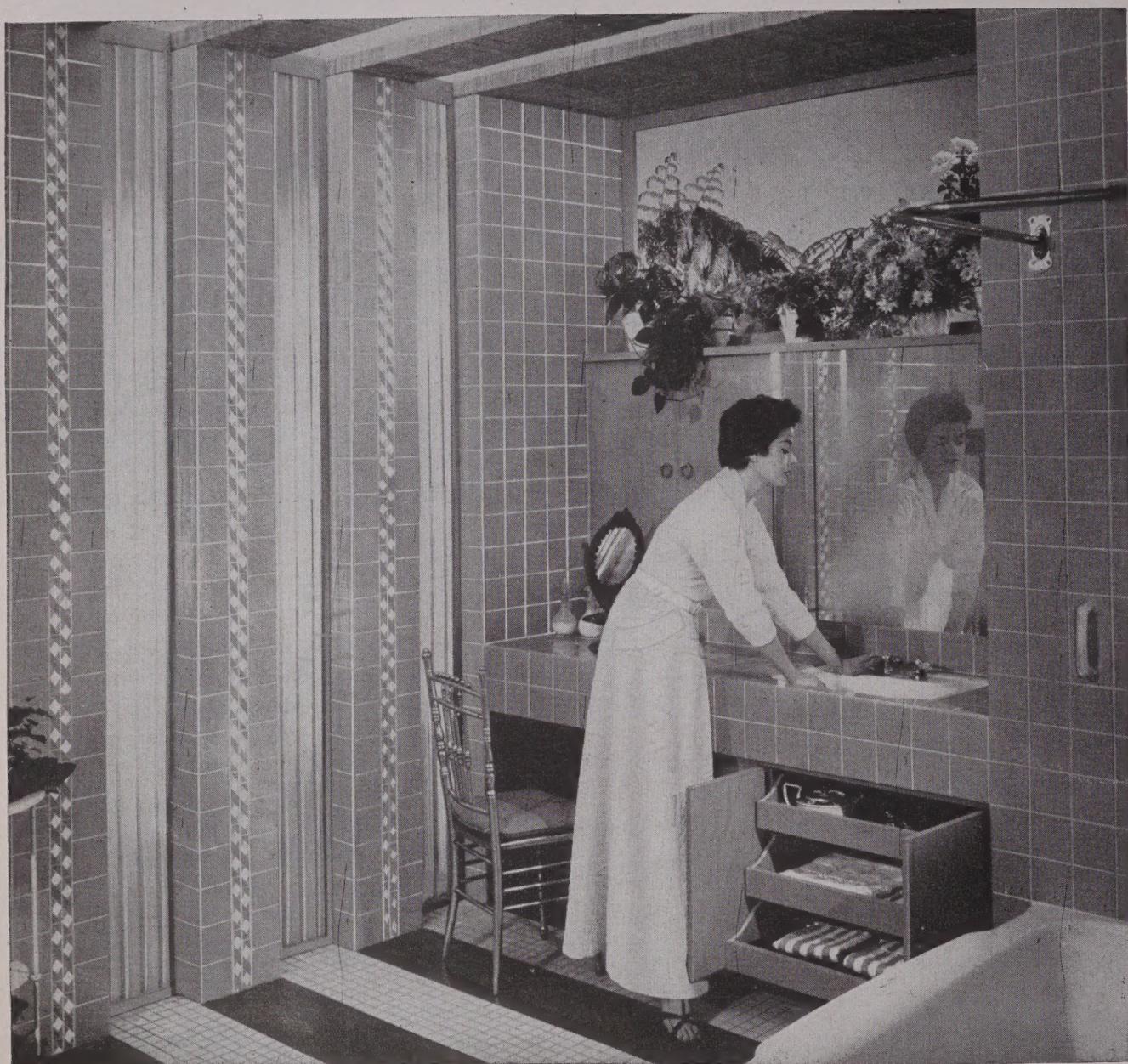
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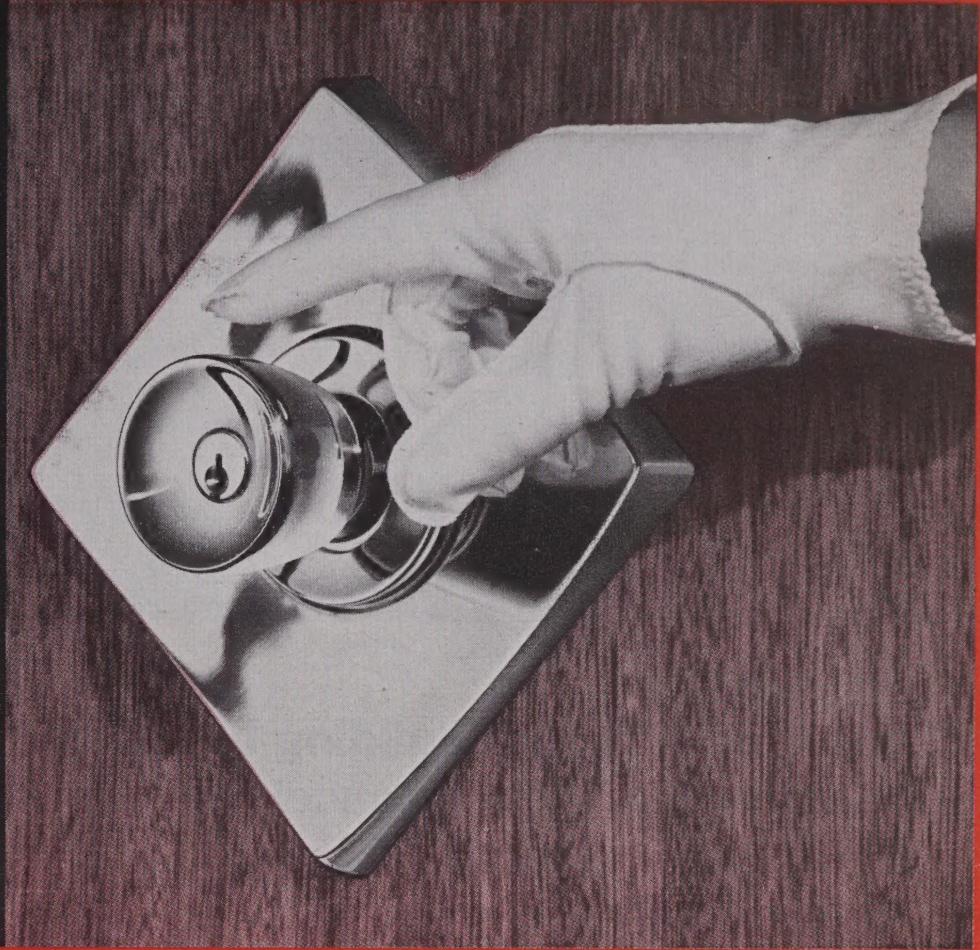
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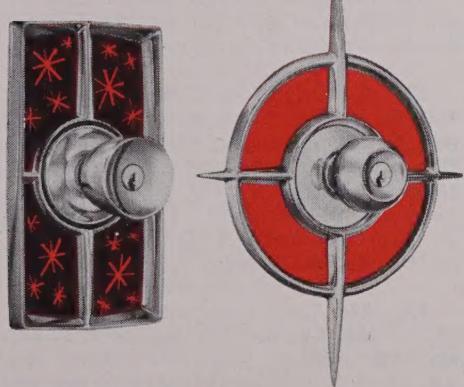
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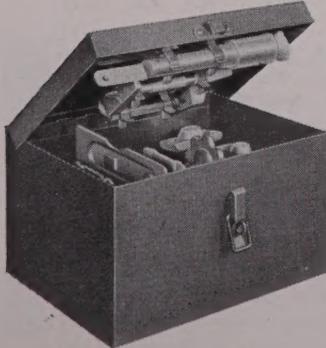
Imperial escutcheon shown with Tulip design lock.



MANHATTAN design open-back escutcheon, 8" x 4 1/8". Background is wallpaper cut to size and applied to door. Shown with Tulip design lock.

CONTINENTAL design open-back escutcheon, 11" x 8". Colored background is paint applied to door. Shown with Saturn design lock.

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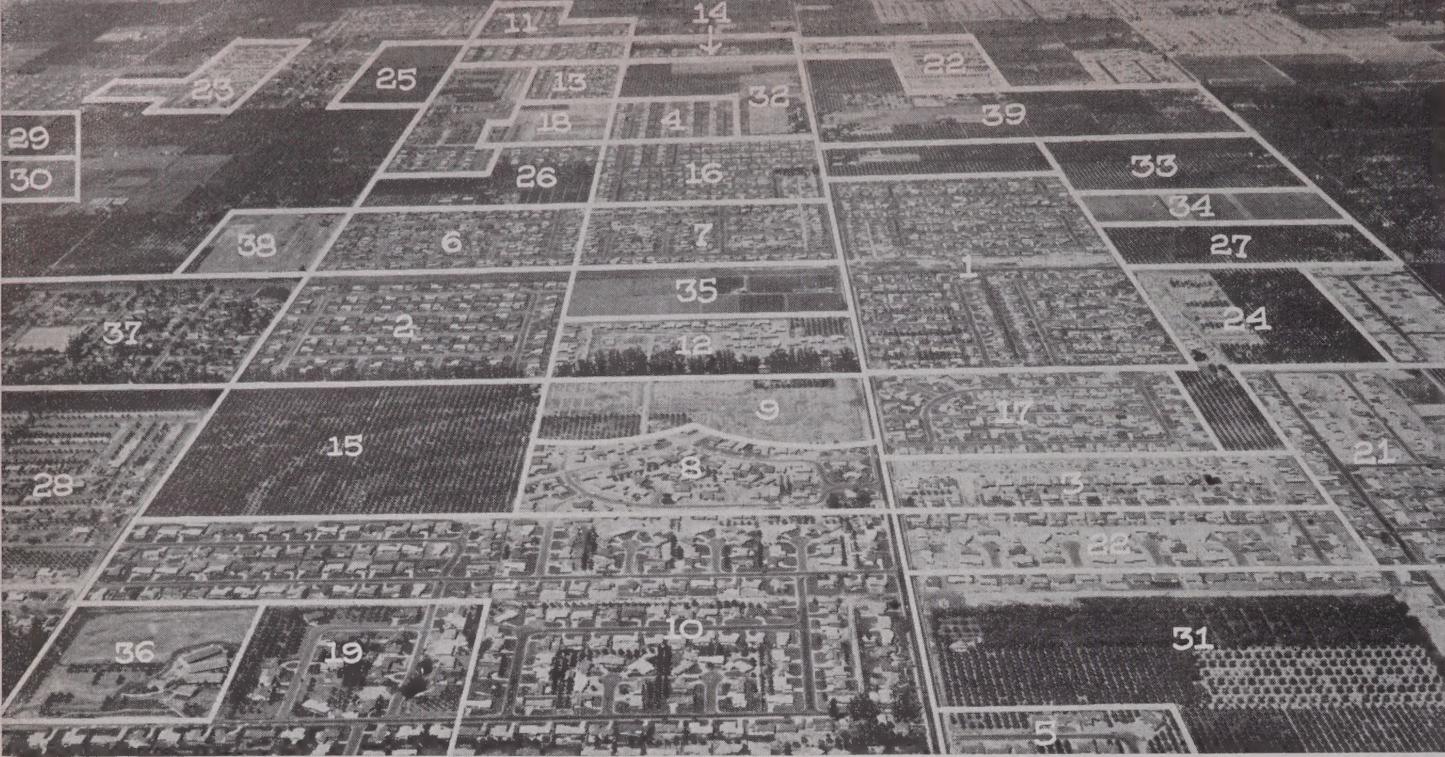
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Aerial Photography

THE LAND DILEMMA:

Cheap money fuels a building boom, but will soaring land prices cancel the gains?

This is the first of a series on rising land prices, problems they raise and possible solutions.

If the trend of the last few years continues, rising land prices may cheat the home buying public out of the better standard of housing that its fabulously rising income might otherwise buy.

This conclusion emerges from a HOUSE & HOME survey of what has happened to the price of subdivision acreage in 16 US and Canadian cities—and why.

In 1950-54, the number of US nonfarm families with incomes of \$5,000 and up soared 69%. FORTUNE figures the average family's income will nearly double to \$8,000 by 1980, which means it should be able to afford a \$20,000 house. **But now that most big cities have exhausted the supply of sites developed during the roaring 20s, the booming pace of homebuilding has driven up the cost of land far faster. In many cities, prices have tripled since 1950; in some they are up 500-600%!**

If that trend continues, home buyers will be getting more expensive lots for their money, instead of a better or much bigger house.

Can the trend be halted? It can, but the strong medicine required may be more disagreeable to the industry than the inflation in land costs. Land prices have zoomed because demand is beginning to outrun supply—not the total supply of raw land in a nation still blessed with an abundance of it, but the supply of raw land close enough to metropolitan centers for commuting, and close enough to sewers, water, roads and transit to entice home seekers to move onto it. A sharp drop of home building would depress land prices. But nobody likes even to contemplate that.

But more fundamental is the pressure of cheap money on land prices. Last year, when some \$1 1/4 billion more short-term bank credit than normal poured into mortgages, the result was pressure on the entire housing industry to produce beyond its capacity. The cost of building materials rose 5%—well ahead of the rise in prices of other commodities and finished products. Land—though unique—is just one more commodity. Moreover, its use depends on the availability of items like pipe, cement for curbs and mains.

Cheap credit encourages builders to expand operations, requiring even more land, while communities (unable to cope with community facilities demand for lack of an adequate tax setup) are increasing minimum lot sizes and insisting on ever more expensive underground installations.

This is selective inflation, with the housing industry at first the apparent winner (through easy sales), but in the long run very likely the victim.

How land prices have soared in the last five years shows dramatically in this air view of the Garden Grove sector of Orange County, Calif., one of the busiest home building areas of the nation since June, 1954.

In 1953, Midwood Construction Co. paid from \$3,250 to \$3,500 an acre for a grove of orange trees which became its Lansdale tract (No. 1 in the keyed photo). The farm just left of it (No. 35) is now for sale at \$8,000 an acre. G. D. Buccola Construction Co. paid \$7,000 an acre early this year for another tract nearby.

The price climb has been steady. Here are dates of sale and prices-per-acre for the other numbered tracts in the photo:

No. 2, early 1954, Tobin Co., \$3,000; **No. 3**, Duff & Davis, Jan., 1954, \$3,700; **No. 4**, Luxury Homes, Feb., 1954, \$3,500; **No. 5**, Tietz, early 1954, \$4,000; **No. 6**, Homes Inc., March 1954, \$4,000; **No. 7**, Lansdale, March 1954, \$4,600; **No. 8**, H. Cedric Roberts & Sons, April 1954, \$3,150; **No. 9**, Roberts, July 1954, \$3,500.

No. 10, Tietz Construction, July 1954, \$5,250; **No. 11**, Buccola, July 1954, \$5,400; **No. 12**, Roberts, Aug. 1954, \$3,800; **No. 13**, Moor Park, Aug. 1954, \$4,000; **No. 14**, Moor Park, Aug. 1954, \$4,000; **No. 15**, H. Cedric Roberts, Sept. 1954, \$4,200; **No. 16**, Midwood, late 1954, \$4,250; **No. 17**, Midwood, late 1954, \$5,000; **No. 18**, Luxury Homes, Feb. 1955, \$4,500; **No. 19**, Minor & Minor, Feb. 1955, \$5,000.

No. 20, Buccola, early 1955, over \$6,000; **No. 21**, Tietz, April 1955, \$5,500; **No. 22**, Tietz, May 1955, \$5,500; **No. 23**, Moore, June 1955, \$5,250; **No. 24**, Moore Park, June 1955, \$6,000; **No. 25**, Luxury Homes, Sept. 1955, \$5,000; **No. 26**, Moore, Sept. 1955, \$5,150; **No. 27**, Moore Park, Oct. 1955, \$5,200; **No. 28**, Minor & Bartleson, Oct. 1955, \$6,000; **No. 29**, Midwood, Dec. 1955, \$5,500.

No. 30, Midwood, Dec. 1955, \$5,500; **No. 31**, for sale now, more than \$7,000; **No. 32**, Buccola, early 1956, \$7,000; **No. 33**, now for sale, \$8,000; **No. 34**, now for sale, \$7,000; **No. 35**, now for sale, \$8,000; **No. 36**, elementary school; **No. 37**, long established settlement of Mexican-American farm labor; **No. 38**, high school land; **No. 39**, not for sale.

NAHB snipes at S&L drive for quality homes

US Savings & Loan League's efforts to encourage better quality housing are picking up speed.

The League is about to issue a land planning manual for its 4,200 members advising them how to develop better tracts. Says the introduction: "Astute S&L management has learned that the housing market bristles with definite danger factors which can not be ignored or left entirely to the builder/developer, because they deeply affect long-term aspects of the Association's own work. *Fast moving obsolescence, sharp competition, neighborhood depreciation, the overemphasis on quantity*—these are all market conditions with which the S&L must deal in a direct way if it truly is living up to the responsibility of safeguarding the savings entrusted to its care. . . ."

While the S&L League was mobilizing its campaign, home builders began openly sniping at it. Said NAHB's Washington Letter: "A new campaign by the US S&L League to persuade lenders to concentrate their mortgage lending in higher-priced housing overlooks the fact there still is a tremendous need for good new houses built within reach of the family of modest means. For the home building industry to abandon these families would

make about as much sense as it would for the automobile industry to stop producing all cars except Cadillacs, Chryslers and Lincolns. . . ."

Meanwhile, backing NAHB's view that public housing is no longer needed, President Joe Haverstick told Congress that a third of housing produced in the last 15 years was "within reach of families of modest income." Last year, he testified, 450,000 homes were built to sell for under \$12,000—including 93,000 selling under \$7,000 and 140,000 selling between \$7,000 and \$10,000.

Congressional opposition to VHMCP gets stronger

Efforts by Democrats in Congress to kill the Voluntary Home Mortgage Credit Program are gaining strength.

Legislation to stop VA from referring direct loan applications to VHMCP has won the blessing of the veterans' affairs committee and been sent to the House floor. HFF-Administrator Albert M. Cole has warned that such a move would "cut the heart out of VHMCP. . . . just when its success has begun to bring new hope" for mortgages for veterans in rural areas.

The bill may pass the House. It is sponsored by Chairman Olin Teague (D. Tex.) of the veterans committee. But it apparently

would face a stiff fight in the Senate. If it becomes law, it would have the effect of making VA mortgage loans available at par from the government in the areas where private lenders charge the highest discounts.

It was the success of VHMCP that led to attacks on it. Since last July 1, VA has been able to spend only \$15 million on direct mortgage loans. At the same time repayments from earlier direct loans totalled \$28 million, netting the Treasury a \$13 million profit. Prospects were that the \$150 million of new money Congress had authorized for direct loans this fiscal year would go untouched.

In its efforts to squeeze a compromise out of the Democratic-controlled congressional committees attacking VHMCP, the administration agreed to an unrealistic discount limit. Now, if a lender requires a discount of more than 2 points and the seller refuses to pay it, VA will consider a direct loan as soon as VHMCP's shortened time limit expires. Administration officials realize a VA loan at 98 in, say, rural Texas, is "completely unrealistic." They justify the deal on grounds of compromising to salvage as much of the program as possible.

Even before the 2 point discount ceiling was imposed, 97% of VHMCP loans to direct loan applicants were going at 2 points or less discount. Over 20% were moving at par.

'CHAOS IN THE KITCHEN'

Builders get an earful of light-hearted advice from consumers

How well does the kitchen in the typical new house work?

Not well enough, says the Kiplinger magazine, Changing Times (circ. 250,000). Some of the trouble is chargeable to wives, says Changing Times in a humorous piece on kitchen chaos. They store pencil stubs and rubber bands in the match bin and clutter up the working space with philodendron and old Chianti bottles. But the magazine fires some barbs at builders, too. Excerpts:

► Many a scamp of a builder should be condemned to cook 200 dinners in the kitchen he designed. Here are a few things he might discover:

► The cupboards come down so low over the working surface that the toast can't even pop up out of the toaster. (Recommended industry standard is 16" clearance above a 36" counter height.—ED.)

► The overhead light in the center of the room guarantees that whatever you do will be done in the gloom of your own shadow.

► There is no place for a large trash can. And remember that as more food comes frozen, pre-mixed and otherwise semi-prepared, there is less garbage and more trash.

► There is no place to store paper bags (except behind the refrigerator). And there is no little wall cupboard that opens from both inside and outside the house for milk bottles.

► Shelves are too deep. What's in the middle is inaccessible. What's in the back is unknown. And what's in the front you seldom want. To get something from the back of a corner shelf, you have to send in a small boy on a stout line. (Recommended industry standard depth is 13" for vertical front cabinets, 8" to 13" for sloping front cabinets.—ED.)

► There is no counter space next to the range. Thus when you remove the turkey from the oven, you have to balance it on your knee.

► There is no counter space next to the refrigerator. Consequently stuff removed to reach the leftover cheese in the back must be spread around on the floor.

► There is no shelf for cookbooks nor big plywood bin with a slot for clippings containing casserole recipes. (The advantage of such a bin is that it can be surreptitiously emptied from time to time and the contents burned.)

► There is no place for a husband to relax while he recites the frustrating things that happened at the office.

The ideal kitchen should be large, well-lighted and efficiently arranged. On one side of the sink should be the dishwasher and near that the place where the dishes, glasses and silverware are stored. On the other side



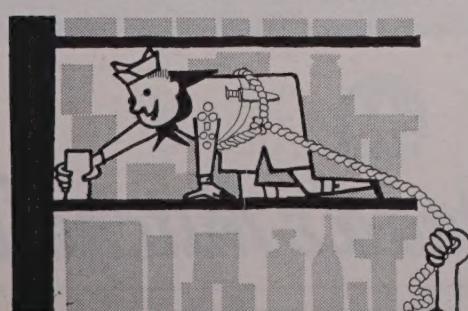
"When you remove the turkey . . . balance it on your knee . . ."

of the sink should be the mixing counter and near that the place where the bowls and flour, salad oil and other staples are stored. Near the stove should be a counter and near that a place where all the cooking utensils are stored.

There should be one section of working surface designed for use as a cutting board. It should be made of bare, treated hardwood and should be so centrally located as to draw all cutting and chopping operations away from surfaces covered with enamel, plastic or stainless steel.

There should be many square feet of counter space and cupboards with shallow or revolving shelves. Shelves should be so shallow, in fact, that things can be stored only one item deep. That means very narrow shelves for spices, slightly wider ones for canned goods and fairly wide ones for bowls and utensils. Flat pans and tops should be filed vertically, not nested.

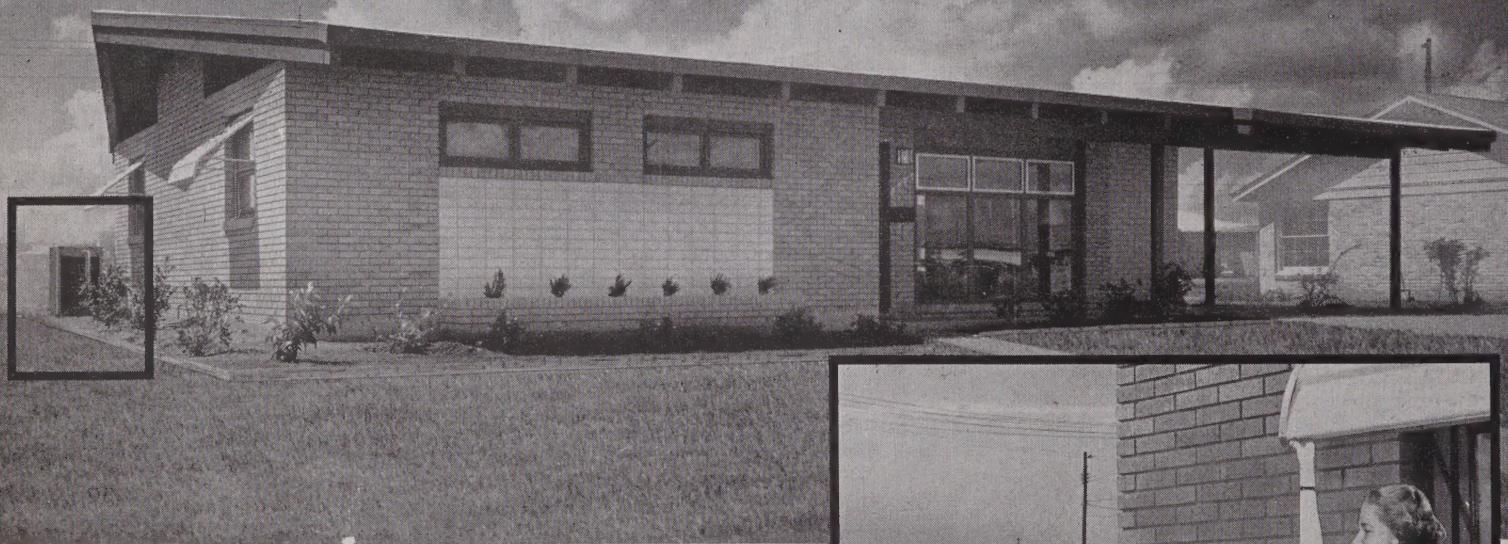
NEWS continued on p. 48



"... You have to send in a small boy on a stout line."

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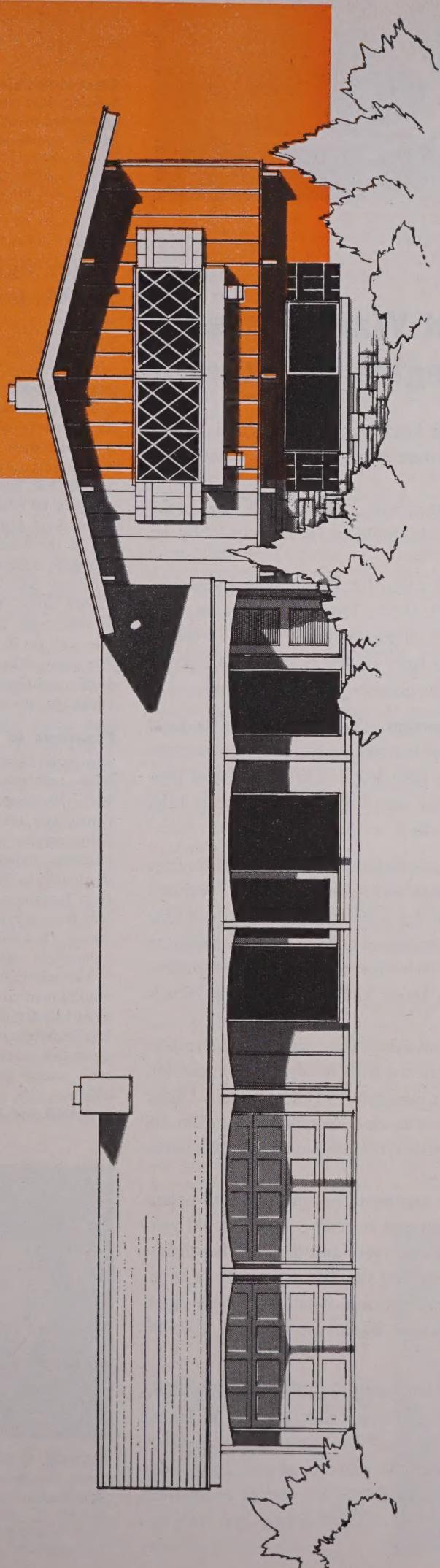


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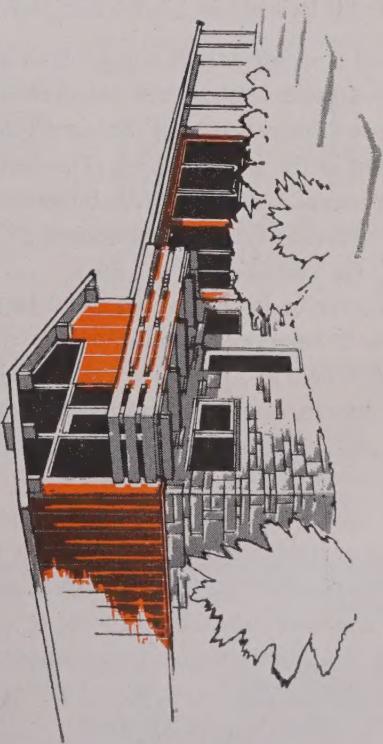
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Senate housing subcommittee pondered housing law amendments with only a few committee members present at most sessions. In this typical scene (l to r): Staffer Donald Rogers, Sen. Homer Capehart (R, Ind.), Sen. John J. Sparkman (D, Ala.), Staffers Jack Carter and Milt Semer.

LEGISLATIVE OUTLOOK:

Will VA loans for World War 2 vets end in '57? Industry begins to worry

Unless Congress acts to extend the GI home loan program for World War 2 veterans at this session, VA plans to stop issuing master certificates of reasonable value early in November.

When that word seeped out in Washington last month, it touched off what looks like the start of a big push by some elements of the building industry to lobby an extension out of reluctant legislators.

Up to now, nobody paid much heed to the fact that for World War 2 veterans, no VA home loan may be guaranteed after July 25, 1957. That means a house must be planned, built, processed, sold and closed—with all papers in VA's hands—before that date. So VA officials realize they must act to taper off the program if Congress does not extend it, or face a chaotic flood of applications in the final months.

NAHB is plugging for a flat three year extension. "Now is the time for local veterans' organizations, business groups and home builders' associations to let your representatives and senators know how seriously premature expiration of this program will affect home building and buying in your area," Executive Director John Dickerman warned builders in his *Washington Letter*.

A staggered shut off date is being talked up by two top men of the US Savings & Loan League, Executive Vice Pres. Norman Strunk and Economist Arthur Weimer. They would have Congress extend the cut off date for a year plus the length of time the veteran spent in the armed forces. This has the big advantage of minimizing the prospective logjam of last-minute VA buyers. (There are still more than 5 million World War 2 veterans who have not bought a GI house, and the average age of vets who received a GI loan in 1955 was 34.)

Another scheme under study on Capitol Hill would create a special FHA section for World War 2 veterans for three years—probably with no down payment but with amortization held to 25 years in keeping with most other FHA programs. Under this plan, the veteran would have to pay FHA's 1/2% insurance premium. The US Treasury has met VA costs which FHA defrays through premiums—\$929 million so far.

As Strunk and Weimer noted, "the principal argument for some form of extension arises from expediency"—i.e. avoiding a fantastic bunching which would generate more VA sales than the industry can handle one year (and thus inflate prices), then cut back drastically for the next three or four. But the industry's stake is large. The percent of housing starts guaranteed under VA has risen steadily for three years. Last year it reached 30%. This year, VA expects to underwrite loans on 400,000 new homes plus 250,000 existing ones.

Congress has shown little enthusiasm for continuing the program. Rep. Olin Teague (D, Tex.), powerful chairman of the House veterans committee, is for letting it die "because it is helping lenders more than veterans" because of high discounts. President Eisenhower's budget message hinted that the program should be allowed to expire, but there are a few signs the administration may be veering away from this view. What happens depends on how much heat veterans groups put on Congress. So far they have built no fires.

Major fight shapes up on FNMA, public housing

Day by day, indications grow stronger that 1956's housing law will turn out a patchwork of compromise tilted toward inflation and more government control of the industry.

The fight that will get into the nation's newspapers—starting probably this month—will be over public housing. As usual, the issue seems sure to be settled only when the housing bill, having passed by House and Senate gets to final conference to adjust differences. Last year, opponents of public housing in the House, where such opposition is strongest, delayed taking up housing so long that they had to accept the Senate-dictated 45,000 units. This year, they do not plan to repeat the tactic. That means the industry may well get its housing law earlier than usual this year. Whether it will have the 35,000 public housing units President Eisenhower wants, or more, is anybody's guess.

Pipelines to the Treasury

Biggest fight inside the industry is over how—and whether—to tinker with Federal Natl. Mortgage Assn. Life insurance companies and the US Savings & Loan League flatly oppose cutting the present 3% stock purchase requirement for lenders who sell mortgages to Fanny May's secondary market. It is the stock purchase requirement that is aimed at turning Fanny May into a privately owned (but still at least partly government-controlled) agency in the future.

The administration wants to cut the stock requirement to 2% of the outstanding principal balance of each mortgage—even though HHFAdministrator Albert M. Cole made it clear this would be a floor and that a higher ratio would be imposed under today's conditions.

NAHB and NAREB are loudly supporting



NAREB testimony was given this year by John W. Bates Jr., chairman of Realtors' Washington committee, and Vice Chairman Robert E. Scott. NAREB's Charles Stewart (left background), director of public affairs, was spectator.

reducing the stock purchase requirement. NAHB wants to cut it to 2½% theoretically, but is urging a new formula which would actually slice it much more. Testifying before the Senate housing subcommittee, ex-NAHB President Tom Coogan (who is now chiefly in the mortgage business as president of Housing Securities Inc. of New York), suggested that when a lender *buys* mortgages from Fanny May, he later be allowed to *sell* the agency the same dollar volume of other mortgages without buying any more stock. Objected Coogan: "It [Fanny May] has been a parasite. . . . Its buying policy has depressed the mortgage market. . . . It forces builders to invest in stock they do not want and must sell at a loss in addition to paying an acquisition fee." Coogan also urged that Fanny May:

1. "Make short term loans to mortgage lenders on the security of guaranteed and insured mortgages up to 90% of its then current purchase price for that class of loan."
2. Resume issuing advance commitments for all kinds of FHA and VA mortgages.

Realtors back stock reduction

NAREB, whose testimony this year was presented by Robert E. Scott of Elizabeth, N.J. and John W. Bates of Richmond, Va., backed both the 2½% stock ceiling and advance commitments.

If home builders cannot get the kind of unlimited coinage of mortgages they want from Fanny May, their second choice is the Fulbright-Sparkman bill to cut Fanny May stock buying requirements on a sliding scale depending on discounts. With a discount of 5 points, no stock purchase would be needed. This would go up to today's 3% requirement for mortgages at 99 or better. The Federal Reserve opposes the idea violently because it would swell Fanny May's business so much it would have to float debentures in a big way. This, in turn, would bring commercial bank credit into mortgages—the very thing the Fed tried so hard last year to stop.

Lenders urge free rates

Lenders again showed they live in a different world from builders—and Congress. The Mortgage Bankers Assn. plumped for wiping out Congressional control over FHA and VA interest rates, noting correctly that this would end discounts and bring more money into the market.

President Carroll M. Sharks of Prudential Insurance Co. warned again that continued government "stimulation of housing credit and efforts to stabilize mortgage interest rates at artificial levels" is bound to inflate home prices. "Average estimated construction cost per unit of privately owned homes" has shot up 97% in the last decade, he said.

Nobody was paying much attention. Cheap money means expensive houses. But neither Congress nor home builders (currently flailing away at community facilities, land and FHA for running their costs up) seem to understand the fact.

At mid-month, first indications appeared of what the Senate would consider. Its housing subcommittee approved a five-year program of 15,000 public housing units a year for the elderly, a doubled military housing program, higher limits for FHA repair loans.

Builder Tom Coogan offers olive branch to public housers, gets cool reception

Photos: H&H Staff

Public and private housers are now talking to each other—a small but possibly significant milestone on the road toward burying their historic quarrels.

For the first time in its 25-year life, the National Housing Conference, public housing's lobbying organization, heard from a leader of the private housing industry at its annual meeting.

Former NAHB President Tom Coogan, now chairman of the Natl. Housing Center, urged public and private housers to stop fighting and "put our efforts into finding a solution (to housing problems) that we can agree on."

Unsurprisingly, he was coolly—though politely—received by the 400 members attending NHC's conference in Washington's Statler Hotel. Years of hearing the "real estate lobby" denounced have conditioned public housers to acclaim only home-grown plans. But NHC Executive Vice President Lee Johnson said: "Any time the builders want to sit down to discuss housing, I think we will."

Coogan conceded that builders "have not yet been able to find a solution" providing adequate housing for families with incomes below \$3,600 a year (subject to some regional variations). But he warned: "If private enterprise is precluded from participating (in rental housing), it will continue to fight the inevitable public housing, if offered as the only solution." Urban redevelopment, he predicted, "is doomed to failure unless a major portion is put within reach of private enterprise."

Amid many cries for more government-aid for "middle-income housing" (nobody defined middle-income), Charles Abrams, chairman of New York state's new commission against discrimination, made the widest-ranging suggestions of the meeting. Among other things, he urged: 1) sample censuses every five years, 2) regional approaches to city problems to help redistribute city populations, 3) a study of minority housing wants in suburbia—Abrams thinks the real market is very small, 4) an overhaul of relocation in redevelopment, 5) state zoning and conditioning of federal aid to cities on rational regional planning. Said Abrams: "The housing problem has become part of a larger problem involving much more than housing. . . . The city alone can no longer grapple with it."



PUBLIC HOUSING'S LEE JOHNSON

Ready to sit down with builders

Stevenson, Kefauver back Lehman housing scheme

Both leading candidates for the Democratic presidential nomination are backing housing legislation that the administration has labeled "an undisguised anti-private enterprise bill virtually from start to finish."

Adlai Stevenson and Sen. Estes Kefauver (D, Tenn.) took their stand on housing policy in messages to the National Housing Conference last month. The conference is public housing's \$62,000-a-year lobby organization.*

Both endorsed the Lehman bill (March, News), which would pump up government suzerainty over housing to hitherto undreamed heights. It would: 1) authorize 200,000 public housing units a year, 2) start a huge middle-income housing program financed by the Treasury, 3) raise maximum FHA amortization to 40 years, 4) expand community facilities loans by \$1 billion, 5) *continued on p. 55*

*Total NHC budget of which \$16,814.46 was reported spent on lobbying during 1955. By contrast, reports to Congress show NAREB spent \$130,005.92 during the year. NAHB spent \$12,734.84 during the first half.



Builder Tom Coogan (r) proposed this solution for middle-income housing: land provided by city, "possibly" realty tax concessions, rapid tax write-off. He appeared on panel with Executive Director Charles Farris of St. Louis Housing Authority (l) and NHC Chairman Ira Robbins (c).



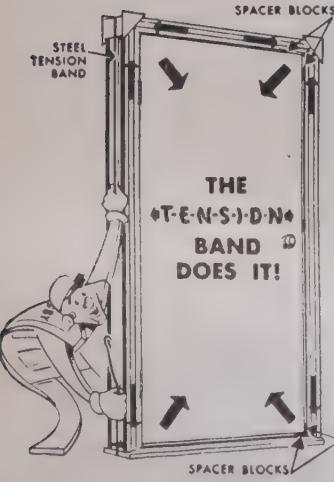
SIMPLY SLIP THE HALVES TOGETHER
IN THE OPENING AND NAIL IT TO THE WALL
IT'S DONE IN **20 MINUTES!**



PAT. NO. 2489029

REDUCES FINISH CARPENTRY COST 65%!

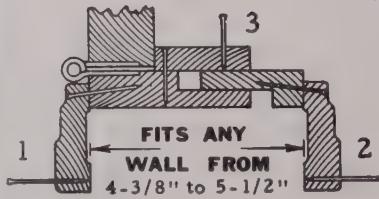
CRATED* FOR DELIVERY IN PERFECT CONDITION



* PAT. NO. 2489029

Tension in the steel band exerts equalized pressure (indicated by the arrows) at the corners to draw the frame in tight contact with the rigid door. Frame joints and mitres are therefore rigidly held square and tight by the door itself.

Spacer blocks between the door and frame serve a dual purpose: (1) They block the frame around the door during shipment, and, (2) Are used to maintain proper door clearances while the door is being installed. Faces are protected by cardboard when shipped by common carrier.



Simply slip the halves together in the opening and drive nails at 1, 2 and 3! There is nothing to saw, plane, bore or mortise!

- Fasteners on mitre joints in the trim keep mitres tight indefinitely.
- Doors conform to the Commercial Standard for the style used. Units are furnished left and right with 1 1/4" inside doors in all standard sizes.
- Butts or hinges are 3 1/2 x 3 1/2, full mortise type. READY HUNG DOOR units are completely assembled with all hardware installed except door knobs.
- The READY HUNG DOOR manufacturer in your territory carries in stock standard units with the trim pattern specie and hardware popular in your area.
- Looks identical to conventional doors when installed.

READY HUNG DOORS CAN SAVE *You* THOUSANDS OF DOLLARS A YEAR!

CALL YOUR LUMBER DEALER • READY HUNG DOORS MADE BY THESE LEADING WHOLESALERS

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Central Building Supply, Inc.

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A. W. Hastings & Co., Inc.

Somerville 44, Mass.

BUFFALO, N. Y.
The Whitmer-Jackson Co., Inc.

CINCINNATI, OHIO
Acme Sash & Door Co.

CLEVELAND, OHIO
The Whitmer-Jackson Co.

Massillon, Ohio

DAYTON, OHIO
Dayton Sash & Door Co.

DENVER, COLO.
Lumber Dealers, Inc.

GRAND RAPIDS, MICH.
Haskelite Mfg. Corp.

HOUSTON, TEXAS
Southwest Sash & Door Co.

INDIANAPOLIS, IND.
Midland Building Industries, Inc.

LOS ANGELES, CALIF.
Ready Hung Door Mfg. Co.

Burbank

MARION, IND.
General Millwork Corp.

NEW YORK, N. Y.
Bailey-Whalen Co.

West Orange, N. J.

OAKLAND, CALIF.
Ready Hung Door Mfg. Co.

PITTSBURGH, PENN.
Iron City Sash & Door Co.

ROCHESTER, N. Y.
The Whitmer-Jackson Co., Inc.

SAN ANTONIO, TEXAS
Ready Hung Door Mfg. Co.

SEATTLE, WASH.
Acme Millwork, Inc.

Kirkland, Wash.

SIOUX FALLS, S. DAK.
Jordan Millwork Co.

READY HUNG DOOR CORP., FORT WORTH 2, TEXAS

ST. LOUIS, MISSOURI
Imse-Schilling Sash & Door Co.

ST. PAUL, MINNESOTA
Minnesota Wood Specialties, Inc.

SYRACUSE, N. Y.
Iroquois Door Co.

TORONTO, CANADA
C. Lloyd & Son Limited

WACO, TEXAS
Frank Stevens Sash & Door Co.

set up a \$1 billion program to guarantee obligations of states and cities to solve community facilities shortages.

Stevenson wrote NHC that Lehman's "overall housing program . . . merits the sympathetic consideration of all Americans." Kefauver, who was a co-sponsor (with eight other Democrats), of the Lehman measure, asserted it faces "realities of housing needs." He promised: "We shall fight for the objectives set forth in that bill."

Although the Lehman bill is accorded virtually no chance of passage this year many a private house is discomfited by the knowl-

edge that today's radical notions often become tomorrow's accepted doctrines.

Most of the ideas in Lehman's measure were hatched by NHC leaders—Chairman Ira S. Robbins, President Edward F. Barry, chairman of the Memphis Housing Authority (both of whom were re-elected); David L. Krooth, Washington lawyer; Ben Fischer and Bert Seidman, AFL-CIO housing experts; John Lange, executive director of the Natl. Assn. of Housing and Redevelopment Officials; Economist Leon Keyserling and Wallace J. Campbell, director of the Cooperative League of the USA.

►"Any circumstance wherein information obtained from or through a VA assignment to appraise or to make compliance inspections will be used to the detriment of the government or veterans."

In the past, VA made its fee appraisers and inspectors certify on completing their reports that they had no interest in the property involved. But VA had not spelled out what it meant by "interest."

The House veterans subcommittee, which jabbed VA into action, thought this was too vague. In an official report, it condemned VA administration in these words:

"The subcommittee has investigated many serious subdivision failures and found that in almost every instance these are directly attributable to inadequate and faulty inspections. . . . Therefore, the solution must lie in more effective administration and supervision by the VA central and regional offices."

"The VA has no standards concerning conflicts of interest for (fee inspectors and appraisers). Such standards should be developed immediately."

More duplicate work

VA's tightening up followed the Congressional prodding docilely. But the truth is that some VA officials were not too happy with how their shop was running. Thomas J. Sweeney, loan guaranty service director, admitted to the American Legion early this year that VA had "failed miserably" in some home inspections.

Sweeney thinks the new rules will clean things up a lot. "There have been complaints that some inspectors have been wined and dined by builders," he says, "or have received gifts. We want to do all we can to prevent this."

But by expanding its staff to police its program, VA also was duplicating FHA's field organization more and more. Such moves may make it harder to put through the consolidation of VA and FHA staffs many a builder thinks is urgently needed.

FHA approves Sec. 220 project of \$16,000 homes

FHA has finally approved the first Sec. 220 urban renewal project involving single-family houses—18 months after the law became effective.

It involves 88 commitments for frame Cape Cod and ranch homes priced at a surprising \$13,000 to \$16,000. They comprise the first of a proposed 195-house development, Forbesdale, on open land near the outskirts of Perth Amboy, N.J. Builder: Oaklyn Construction Co. of Woodbridge, N.J.

The area came under the helpful cloak of 220 terms (90% mortgage based on replacement cost) because the city, in its HHFA-approved workable program, had set aside the 48 acres involved for redevelopment as single-family detached homes and a shopping center. Oaklyn bought the land—without write-down—from the Perth Amboy Redevelopment Authority. Perth Amboy residents get a 30-day preference on buying houses.

The Sec. 220 boxscore:

	Projects	Units
Committed by FHA	7	1,595
Applications to FHA	12	3,857

NEWS continued on p. 59

Grand jury ends 18-month probe of 608 'scandal,' brings forth only 2 indictments

After listening a year and a half to the government's case against alleged wrongdoers under the defunct FHA Sec. 608 rental housing program, a federal grand jury in Washington reached the end of its legal life April 6.

The results of what the administration once touted as a major scandal were not impressive:

► Builder Ian Woodner was indicted on two charges of making false statements in connection with his swank \$5 million apartment hotel, "The Woodner," in Washington.

► Richard C. McCormick of Vienna, Va., was indicted for perjury. The grand jury accused him of falsely representing that \$25,000 he received for giving advice to clients was a loan instead of a gift.

Lawyers for builders thought it significant that neither of these men ever had any official connection with FHA. The Woodner indictment, they contend is based largely on a technicality. The grand jury charged Woodner with falsely certifying that one section of his project had no outstanding obligation at the time he was seeking FHA financing. This section was known as Rock Creek Plaza No. 1. James M. McInerney, Woodner's attorney, said the Woodner apartments were built by the Jonathan Woodner Co. and any outstanding obligations were in its name and not that of Rock Creek Plaza No. 1. He said the two companies are "sister" corporations.

The grand jury wound up its deliberations without a word about former FHA Asst. Commissioner Clyde L. Powell, whom the government had called the arch-conspirator in its accounts about FHA's windfall past. Of Powell, Deputy HHFAdministrator William F. McKenna, in charge of "cleaning up FHA," had written:

"It is not surprising that a man with a criminal record, conveniently 'lost' in FHA's files, became the czar of the nation's post-war rental housing program, granting and withholding favors worth millions of dollars, and extracting personal gain for himself out of the administration of his public



WOODNER

trust, reflected in higher rents and added burdens on thousands of families of limited means.

"The total of payments stated to have been made by various Sec. 608 promoters to the former assistant commissioner in charge of rental housing, Clyde L. Powell, and Powell's receipts for which no other explanation can be found, goes comfortably into six figures for the years 1946 to 1950.

"The story of the corruption of FHA's postwar apartment construction program from 1946 to 1950 is largely the story of the reign of Clyde L. Powell."

Despite these allegations, the grand jury brought forth no indictment against Powell, had nothing whatsoever to say about him.

Another grand jury could be impaneled to give the charges another going over but it seemed unlikely. Powell's attorney, Daniel B. Maher, was elated over the outcome. Said he:

"If the grand jury has been discharged without taking any action against Powell, it is an inescapable conclusion that all the wild and reckless charges made in public print and before congressional committees about him were without basis in fact. If there had been any substance to these charges, the grand jury would have taken action."

VA tightens supervision on appraisers, inspectors

Congressional needling has finally stirred VA into tightening up supervision of GI home loans.

VA ordered each of its 65 regional offices to hire construction analysts—a new job. They will check up on VA fee appraisers and inspectors who are supposed to see that builders conform to plans and specifications and VA minimum property requirements. The analysts will be told to make on-site inspections, report how well the fee men work.

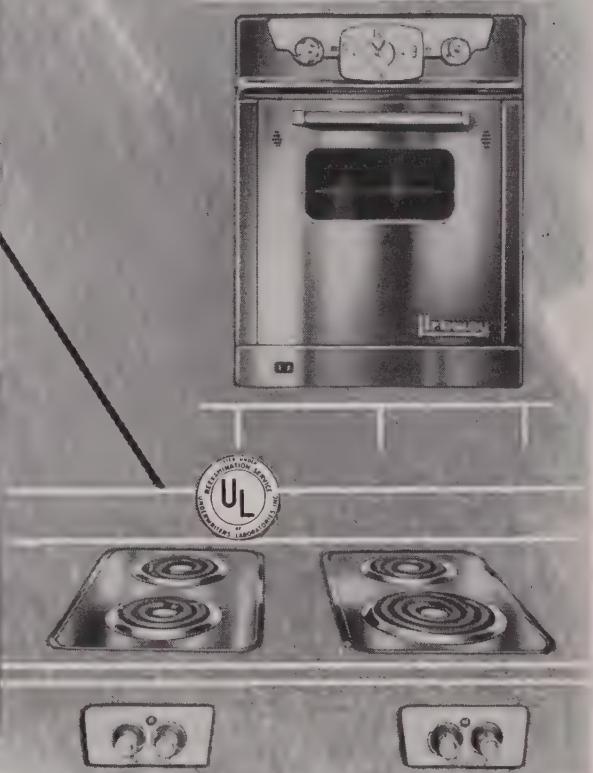
VA also notified the 6,300 appraisers and 3,100 inspectors on its approved rosters that they must sign a new "VA Code of Standards." It tightens up the rules to prevent conflicts of interest. The rules now bar fee appraisers and inspectors from:

► "Any connection that may result in a conflict between the private interest of the VA fee appraiser or compliance inspector and his duties and responsibilities to VA and veterans."

► "Any connection that may tend to bias his judgment as a VA appraiser or inspector."

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This is a bird's-eye view of Centex's Anaheim tract.

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Big, successful builders, such as Centex, insist on getting **MORE** for the dollars they spend in their kitchens. That's why PREWAY'S "built-in" advantages carry such an appeal . . . advantages like singular beauty in design that adds to saleability, exclusive functional features that highlight greater value, and fast, easy installation that reduces labor cost as much as 25% below that of some contemporary ovens and counter-tops. All of this means that Centex offers a better kitchen within the limits of a sharp pencil budget.

You'll want the entire PREWAY built-in story — gas and electric. For complete details — including specification data, see Sweet's File or write —

MORTGAGE MARKET:

Credit squeeze threatens mortgage pinch as severe as drought of '53

The mortgage market is tightening abruptly. Discounts on FHA and VA loans have begun to increase again after about four months of stability.

Mortgage men, eyeing the drop in prices of longterm government bonds and the Federal Reserve's new boost in rediscount rates, are predicting a pinch that may become as severe as the celebrated money drought of 1953.

Up to mid-April, the wonder was that the price of FHAs and VAs had fallen as little as it had—only a scattered point or half-point in a few cities. But mortgages are always slower to reflect changes in the cost of money than other investments. It is just a matter of time, said one broker, before paper that was bringing 99 will have to go at about 97 to stay competitive with other investments.

Vice President Robert Morgan of Boston's 5¢ Savings Bank sums up the outlook this way: "The market is in a state of flux—wobbly and uncertain. It's already reflecting the Fed's efforts to try to keep the optimism of the country from running away with itself. Uncertainty is keeping some lenders out of the market. It is starting to cut the volume of money available for mortgages. And what trading there is is trending to the bottom side of price ranges. I see no prospect of easing for several months."

The money pinch is reviving talk of hiking VA's interest ceiling, now fixed by law at its current 4½% (FHA has a legal ceiling of 5%). But no one gives such a measure any chance to get through Congress in an election year.

Instead, the squeeze will probably produce more demand by legislators to loosen up FNMA. NAHB and some Democrats back this but mortgage bankers and the administration oppose it. The Fulbright-Sparkman bill, for example, now seems a good bet to be included in whatever general housing legislation Congress adopts. It would lower stock purchase requirements for FNMA's secondary market as discounts increase. With a 5-point discount, a seller would have to buy no FNMA stock at all. Federal Reserve officials say this would put more commercial bank credit back into mortgages—the very thing the Fed acted to halt last year.

102 paid for first FHA military housing mortgages

The first FHA Title VIII mortgage sold under its new incarnation as the Capehart Act brought a two point premium.

A group of school endowment funds and a philanthropic investor agreed to pay 102 for the \$12.5 million FHA mortgage covering 944 units of military housing at Abilene Air Force Base in Texas.

The high price—some four points more than what East Coast investors are paying for FHA Sec. 203 loans in that area—is virtually proof positive that the investment world recognizes that the new Capehart Act has spawned an entirely new kind of super-safe mortgage paper.

It may also lead the Democratic-controlled Congress to try to rejigger the law again to kill the premium features.

What makes the new Title VIII so enticing is the Defense Department's guarantee to meet the mortgage payments. Says Vice President Arthur M. Hurd of Pringle-Hurd & Co., New York mortgage brokers who arranged the first loan: "FHA insurance becomes academic. Attorneys think an investor could go directly to the US Court of Claims to enforce the Pentagon's guarantee without first going through FHA procedures."

Moreover, there is virtually no paper work on the new military mortgages. "You don't even have to send the Pentagon a bill," says Hurd. "There is no insurance, no taxes."

This makes a military mortgage come pretty close to the security of a government bond. And even with 4% interest, a Title VIII mortgage bought at 102 will yield 3.6%—after allowing for the fact it may be prepaid in full after six years without penalty.

With approval of 2,690 more military housing units the total now planned by the Pentagon is 49,866 in 111 projects.

NEWS continued on p. 63

MORTGAGE MARKET QUOTATIONS

(Sale by originating mortgagee, who retains servicing.)
As reported to HOUSE & HOME the week ending April 18

FHA 4½s (Sec. 203) (b)

City	Minimum down*— 30 year		Minimum down*— 25 year		25 year, 10% down		City	30 year, no to 2% down		25 year, 2% down		25 yr. 5% down or more
	Imme- di- ate	Future	Imme- di- ate	Future	Imme- di- ate	Future		Imme- di- ate	Future	Imme- di- ate	Future	
Boston local	a	a	a	a	a	a	Boston local	par-101	par-101	par-101	par-101	par-101
Out-of-state	96-97	96-97	96½-97½	a	a	a	Out-of-state	95-97	a	96-97	96-97	a
Chicago	98-98½	97-97½	98-99	98-99	98-99	98-99	Chicago	97-98½	97-98½	97½-99	98-99	98-99
Denver	a	a	98½-99	98½-99	99-par	98½-99	Denver	98-99	97½-98½	98-99	97½-98½	98-par
Detroit	97-98	97	97½-98½	97½	98½-99	98½	Detroit	94½-95½	95	96-97	96	97½-98½
Houston	98	a	98-98½	a	99-par	99-par	Houston	96½-97	a	97-98	98b	98-99
Jacksonville	97-98	97-97½	a	98-par	99	98	Jacksonville	96-97	96	96-97	96	97
Kansas City	97-99	97-99	99	98-99	97-98	98	Kansas City	97-98	96-97	97-98	96-98	97-98
Philadelphia	par	par	par	par	par	par	Philadelphia	98½c	98½c	99	99	99
San Francisco	99-par	a	99-par	a	par	99-par	San Francisco	95½-96	95-95½	95½-96	95-96	97½-98
Wash., D.C.	99	98-99½	99	98½	99	98½	Wash., D.C.	97	96½	97½	97	98-99

* 7% down on first \$9,000

SOURCES: Boston, Robert M. Morgan, vice pres., Boston Five Cents Savings Bank; Chicago, Maurice A. Pollack, vice pres. & secy., Draper & Kramer, Inc.; Denver, C. A. Bacon, vice pres., Mortgage Investments Co.; Detroit, Stanley M. Earp, pres., Citizens Mortgage Corp.; Houston, Donald McGregor, exec. vice pres., T. J. Bettes Co.; Jacksonville, John D. Yates, vice pres., Stockton, Whately, Davin & Co.; Kansas City, Byron T. Shutz, pres., Herbert V. Jones & Co.; Philadelphia, Robert S. Irving, exec. vice pres., W. A. Clarke Mortgage Co.; San Francisco, Raymond H. Lapin, pres., Bankers Mortgage Co. of California; Washington, D. C., George W. De Franceaux, pres., Frederick W. Berens, Inc.

VA 4½s

City	30 year, no to 2% down		25 year, 2% down		25 yr. 5% down or more
	Imme- di- ate	Future	Imme- di- ate	Future	
Boston local	par-101	par-101	par-101	par-101	par-101
Out-of-state	95-97	a	96-97	96-97	a
Chicago	97-98½	97-98½	97½-99	98-99	98-99
Denver	98-99	97½-98½	98-99	97½-98½	97½-99½
Detroit	94½-95½	95	96-97	96	97½-98½
Houston	96½-97	a	97-98	98b	98-99
Jacksonville	96-97	96	96-97	96	97
Kansas City	97-98	96-97	97-98	96-98	97-98
Philadelphia	98½c	98½c	99	99	99
San Francisco	95½-96	95-95½	95½-96	95-96	97½-98
Wash., D.C.	97	96½	97½	97	97½-98½

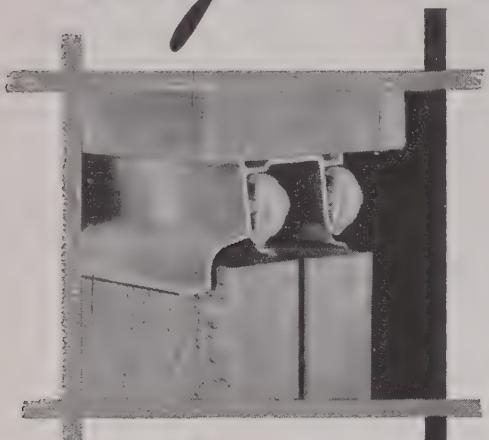
► Immediate covers loans for delivery up to 3 months; future covers loans for delivery 3 to 12 months.

► Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones.

► Quotations refer to new houses of typical average local quality with respect to design, location and construction.

NOTES: a—no activity. b—limited market at this price. c—for typical package with ½ minimum down payment and ½ with 10% down.

Why use "washington" plaster ground* track?



because:

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- can be used with wallboard or plaster
- completed installation has a clean, contemporary appearance.



FASTEN TRACK TO HEADER

Plaster Ground* Aluminum Track is attached to the header before the house is plastered. It is available in 2 sizes—No. 642 track for $\frac{5}{8}$ " to $\frac{3}{4}$ " by-passing wardrobe doors; No. 643 track, for 1" to $1\frac{1}{8}$ " doors.



APPLY PLASTER OR WALLBOARD

After track is attached to header, plaster may be applied right down to the bead on the track. Track channels are masked to prevent plaster from dropping into "V" groove. Remove masks when plastering is completed. If wallboard is desired, it also may be set flush with the plaster ground of the track. If wood trim is desired, it can be applied when used with wallboard.



HANG DOORS & FASTEN GUIDE

Next, hang doors. The Washington No. B666N double wheel hanger with pivoted cross-arms is suggested for use on $\frac{5}{8}$ " to $\frac{3}{4}$ " doors. No. B668N hanger for 1" to $1\frac{1}{8}$ " doors. Double wheel hangers used with this aluminum track will accommodate doors weighing up to 100 lbs. Single wheel hangers can be used on these installations if desired.



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Oscar & Associates



PHMI CONVENTION:

Prefabbers set sights on 10% of housing market this year, half of it by 1970

Prefabbers think this is the year when they may start their much predicted vertical take-off toward capturing a major slice of the US housing market.

Such optimism was everywhere at the 13th annual convention of the Prefabricated Home Manufacturers' Institute in Chicago. Prefabbers pointed to their record 93,000 starts last year as evidence that the surge was on. That was nearly three times the 37,200 prefabs put up in 1946 (see charts, p. 66). The 93,000 prefabs amounted to a 20% jump over 1954 output, while total nonfarm housing starts rose only 9%. This year, most prefabbers are looking for another 25% increase, are boldly predicting they will ship 120,000 new units. Says new PHMI President George E. Price: "In ten or 15 years, half the homes built in America will be prefabricated."

With growth come fresh problems. At least three were on prefab leaders' minds:

► *Horse and buggy* mortgage financing does not fit the speed of modern prefab construction. A prefab can go up in three weeks—so fast that mortgage negotiations frequently hold up closing, prefabbers complained. Some banks take 90 days to complete their work. Large prefab firms have formed acceptance corporations* but small ones have little chance of doing so. Said Retiring PHMI President Peter Knox Jr.: "The whole pattern of interim and long term financing seems ripe for streamlining. Some say that as much as 10% of the cost of the house is in red tape and expense of construction and permanent finance. Much of our planning and financing is as obsolete as fabrication techniques were 12 years ago."

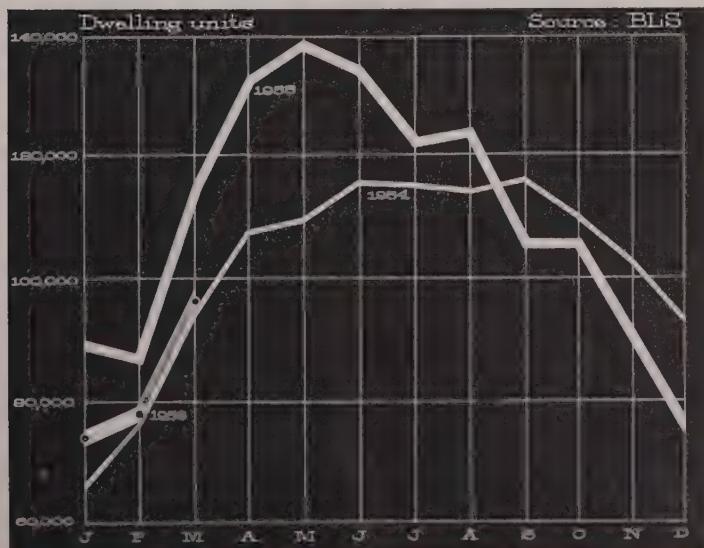
*US Steel Homes, National Homes, Page & Hill, General Industries and Harnischfeger Homes have financing subsidiaries now. Richmond, Modern and Scholz Homes may organize them.

Prefabrication, both on-site and off-site, is going to play a progressively bigger role in the home building industry, NAHB President Joseph Haverstick, (2d from right) told PHMI in Chicago. With him are, from left: PHMI officers Horace N. Burston, president of American Houses Inc. of New York City, secretary-treasurer; George E. Price, executive vice president of National Homes Corp. Lafayette, Ind., president; Robert J. Lytle, president of Modern Homes Corp., Dearborn, Mich., vice president.

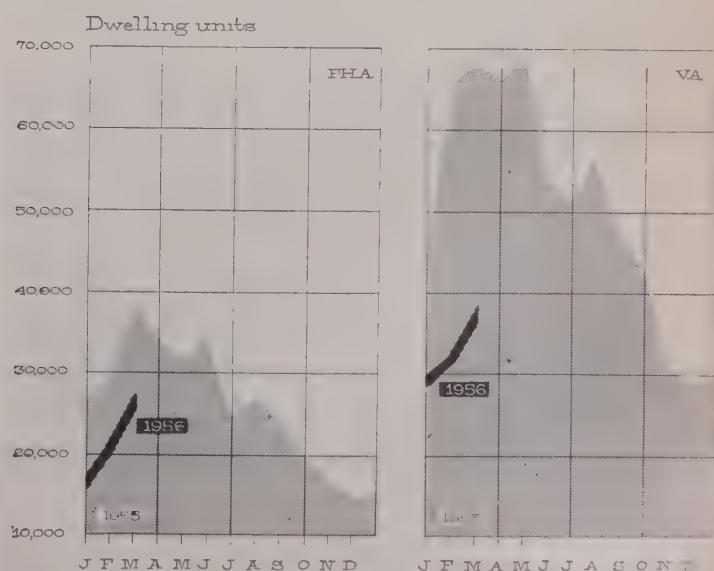
► Should PHMI lay more stress on standards—both for membership and prefabricated homes—to make sure the prefab industry's responsibility keeps pace with its prospects for growth? This problem ("as difficult as any PHMI has faced") was posed by President Price. Said he: "As we become increasingly important in the economy, more people are going to regard the Institute as the focal point of responsibility in the industry. . . . Greater precision in the classification of membership is necessary. For example, a bank investing in a mortgage must be able to tell the extent of the manufacturer's responsibility for the house package he produces."

Price recalled that the voluntary Commercial Standard for Prefabricated Homes, adopted in 1947 but not kept up to date, has been so little promoted by PHMI that it has fallen into disuse. He said: "Setting of our own PHMI standards would easily lead to the drafting of a model performance code to meet the need of the very great number of communities who want to recognize the merits of prefabrication without opening the door to the marginal operators who always seek to ride our coattails. . . . Since as many reputations are hurt by loose fiscal policies as by inferior products, we must demand of our

continued on p. 66



Housing starts reveal the pace of home building is slowing down. Starts in March totalled only 96,000 (94,400 private, 1,600 public). Seasonally adjusted, that is 1,140,000 new houses a year—a 5% drop from February's 1.2 million-a-year clip. For the first quarter of the year, starts totalled 248,000, a drop of 43,000 from the 1955 mark.



FHA and VA applications remain well below last year's unusually high levels. FHA had 26,376 applications in March, up from 20,189 the month before and higher than any time in the last seven months. VA had 37,511 appraisal requests in March, almost the same as February's 37,134.



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LIGHT for Living in your model home is a traffic builder that goes to work with the flip of a switch. It's a "sales clincher" for any home.

Light for Living brings out the beauty of furnishings. It adds color and warmth. It makes the entire home more useful for all the family.

Right lighting, so vital to comfortable living, depends on your careful planning of *wall lighting* . . . and your selection of the correct *lighting fixtures* for your model home. The technique is "light-conditioning" . . . and here are two useful books to help light-condition your homes. These are just two of the many ways General Electric is working to

help the building industry make the most profitable use of Light for Living.

WALL LIGHTING GUIDE—a colorful new book, with specific installation instructions, shows how to build more sales appeal into model homes by the effective use of lighted valances, cornices and wall brackets. Here is truly the decorative, the eye-catching phase of Light for Living.

LIGHTING FIXTURE GUIDE—40 easy-reading pages, designed to make the selection of fixtures as easy as possible. Builders who use it can put more sales value into their homes, and provide buyers with a visible guide to light-conditioning the home they select.

Send for your two books today! See how Light for Living can help you sell more homes, quicker, for better profits.

Progress Is Our Most Important Product

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Clip This Coupon and Mail It With 50¢ Today!

General Electric Co.
Large Lamp Dept. HH-5
Nela Park, Cleveland 12, Ohio

Please send me _____ copies of "Wall Lighting Guide" and "Lighting Fixture Guide" at 50¢ per pair.

NAME _____

STREET _____

CITY _____ ZONE _____ STATE _____



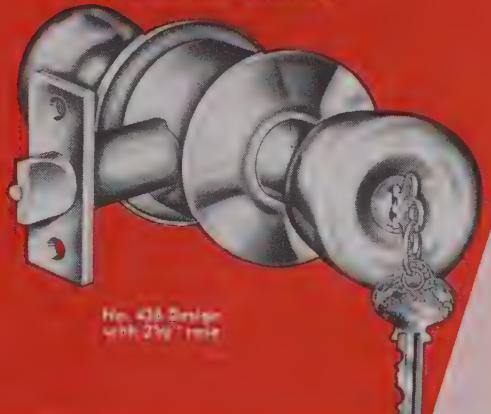
The wall-to-wall lighted valance illuminates draperies and ceiling; and a lighted wall bracket dramatizes the buffet area. The hanging fixture combines pleasant upward light with spotlight sparkle for the table. This flexible lighting plan provides a mellow atmosphere for relaxed dining—and a strong sales plus for the builder's model home.

Luxury locks in 2 economy price ranges!

medium-priced
CORBIN *Defender* locks

featuring new Polaris
and Sunburst Trim!

- Exclusive "Velvet-Glide" Action for "Luxury feel!"
- Dual Brass-to-Steel Bearings on each knob lengthen life
- 100% Reversible Hand without keying speeds installation
- Corbin 5-Pin Tumbler can be master-keyed with other Corbin cylinders
- 5 Residential Functions (9 commercial functions)



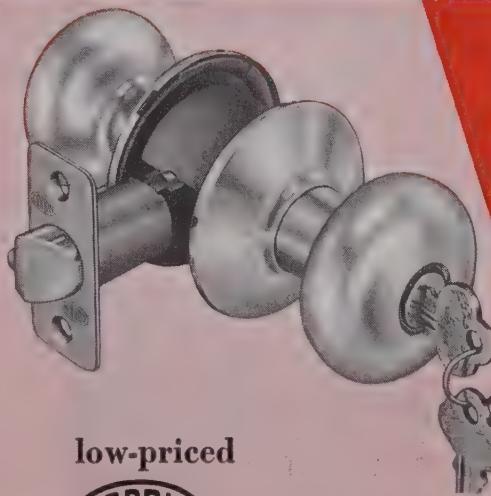
You can put a CORBIN luxury lock on every door in the house — and still have the choice of two economy price ranges! CORBIN *Defender* and *Guardian* Locks provide all the most-wanted lock functions for normal-duty residential use *plus* literally *hundreds* of distinctive styling possibilities! Both of these outstanding lock values assure you easy installation, smooth operation, trouble-free service. Both are fully guaranteed. You'll see their basic designs, handsome new trim, and a few of their extra-quality features on this page. Write for full details on all their advantages.

low-priced

CORBIN *Guardian* locks

featuring new Rancho Trim!

- Exclusive "Spring Ring" inner rose plate maintains snug fit
- Screw Slots on inside rose plate speed assembly
- External Parts in wrought brass, bronze, or aluminum
- Internal Parts rust-resisting, precision-fitted, for long life
- 5 Residential Functions



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Now Wasco brings you **ACRYLITE**

... exciting embedments
 captured forever in lightweight
 acrylic . . . the same shatter-resistant plastic
 used in famous Wascolite Skydomes.
 Try this new structural material for space
 dividers, screens, panels, sliding doors.
 Write for samples and literature.

WASCO
PRODUCTS, INC.

members that they preserve financial integrity. The Institute must be aware that companies having a greater interest in selling stock than actually producing homes may hurt the whole industry."

► *Is a wave of mergers necessary if the prefabricated industry is to reach its potential for industrialization?* Advised Outgoing President Knox: "Undoubtedly some prefabricated companies, particularly the smaller ones, should consider acquiring the financial strength, national coverage and other benefits that flow from mergers."

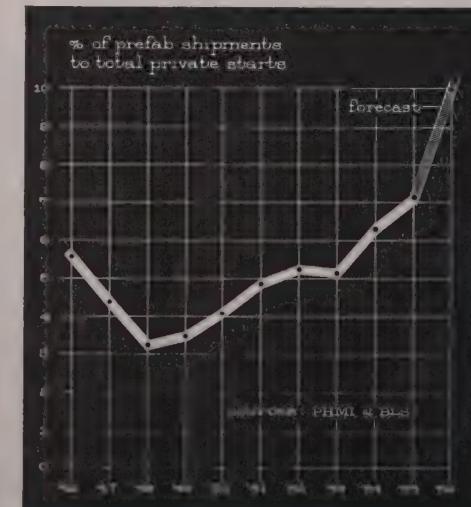
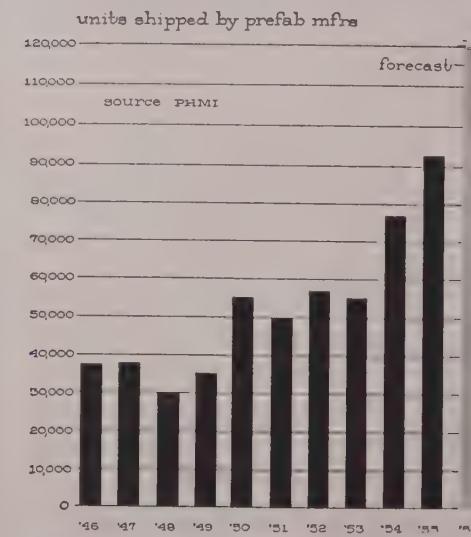
Prefabbers study chemical products technology

Progress of home building from now on may perhaps be changed by development of chemical building-materials products.

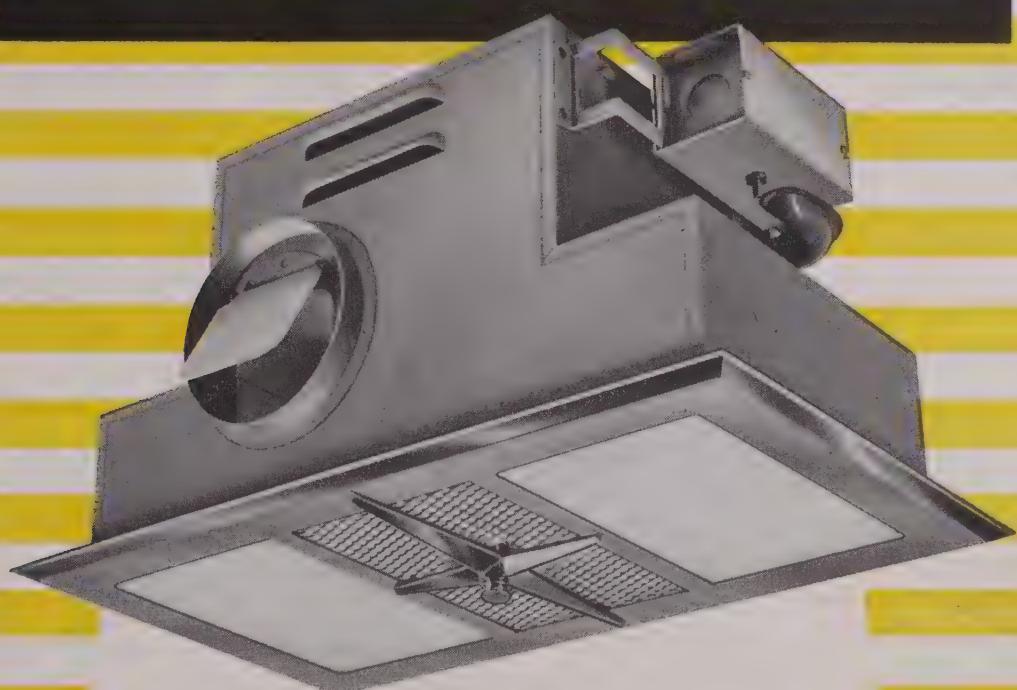
Convening PHMI members (there were 150 at the Chicago sessions) heard that prediction from Charles H. Topping, senior architectural and civil consultant in DuPont's engineering department. DuPont has started a long range research program to see what building materials can be developed out of its chemical know-how.

Topping forecast that some products of the "family of foams" would prove strong and lightweight cellular items with good adhesion to metal, wood, masonry, glass and fabrics—with thermal insulation and acoustic properties.

TWO VIEWS OF PREFAB PROGRESS



**THE RIGHT UNIT for inside bathrooms
... UNDER FHA REQUIREMENTS**



TRADE-WIND LIGHT/VENTILATOR COMBINATION

Here's the perfect answer — in one inexpensive unit — for light and ventilation in inside bathrooms under FHA requirements (and outside ones, too!)

Trade-Wind Model 1701 Combination Light/Ventilator is a beautifully designed flush-type ceiling unit. Two 75-watt lamps provide brilliant illumination. And the time-tested Trade-Wind 100 CFM blower unit assures complete ventilation—for both inside and outside baths—eliminating steam, lingering dampness and odors.

Model 1701 installs between joists and the single unit cuts installation expense. The unit also includes a backdraft damper and is pre-wired, further eliminating extra work in running asbestos leads or installing a separate shutter. It can be wired to a single switch as required by FHA for inside bathrooms or 3 wires run to a double switch. The Trade-Wind Time-Delay Switch also can be used.



Powerful Bathroom Ventilator

This compact Trade-Wind Model 1201 Ventilator installs in the ceiling for complete bathroom ventilation. Can be wired with separate light to single switch as required by FHA for inside bathrooms. 100 CFM. Built-in backdraft damper. Optional white enamel or bright chrome grille.

Trade-Wind Motorfans, Inc. 7755 PARAMOUNT BLVD., DEPT. HH, RIVERA, CALIF.

MATERIALS & PRICES:

Big change in lumber marketing looms in wake of ban on delaying transit cars

Home builders and lumber dealers may have less trouble over lumber shipments this summer than they expected.

The Interstate Commerce Commission has cracked down on lumber manufacturers with an order banning deliberately circuitous routing of loaded freight cars. The edict is aimed at minimizing what is expected to be one of the worst car shortages in history this summer.

It could also mean a major change in lumber marketing. Whether it will affect prices remains to be seen.

The practice of transit lumber shipping has mushroomed in the past four years. Some experts think half of west coast lumber and 80% of green dimension and boards now go to market that way. Small mills without storage yards or sorting facilities take advantage of the curious complexities of freight rate schedules to use freight cars as a free warehouse on wheels. Instead of sending transit lumber from the Pacific Coast to Chicago in 7 to 12 days by direct routes, mills send it the long way around to take 20 to 25 days (and railroads have not squawked). This gives wholesalers more time to find buyers while the cars are enroute.

More and more retail yards and concentration yards have been learning to take advantage of the system, too. It cuts their own needs for big inventories, storage yards and sheds. A dealer in Chicago or Philadelphia can pick up a car of lumber that is already in transit—perhaps only a day away—and he knows there will always be a few such cars riding the rails. Since little mills cannot do much sorting, transit cars usually contain random lengths, sometimes both random lengths and widths. But the immediate availability of transit lumber offsets this disadvantage.

Small mills and their transit wholesalers raised the expected howl when ICC acted. One group went into federal court and won a temporary restraining order against the ban.

After thinking it over, several west coast wholesalers were willing to back down from their first forecasts that wiping out transit shipping would put them out of business. In recent years, almost every time the lumber market has broken, the cause has been a big oversupply of transits coming to market all at once.

FHA, lumbermen tangle on how thin 1" board may be

An inch by lumbermen's standards—and by FHA's—has never been an inch at all. It is 25/32".

And the American Lumber Standards committee allows a 4% shrinkage which means that a nominal 1" board can actually be 3/4" after shrinkage.

At least that was how it was up until last month. Then came the Battle of the Boards—a four-cornered skirmish between FHA, home builders, west coast lumbermen and Southern pine operators. When the truce flags went up, it looked as if ALS would have to redefine 1" for the nation's lumbermen.

Penalty of change

The rumpus began when the West Coast Lumbermen's Assn.—revising its overall grading scheme (March, News)—changed its official measurement for 1" boards from 25/32" to 24/32" (that's 3/4"). Since that did not conform to ALS standards, west coast mills began stamping boards 3/4"—which they were.

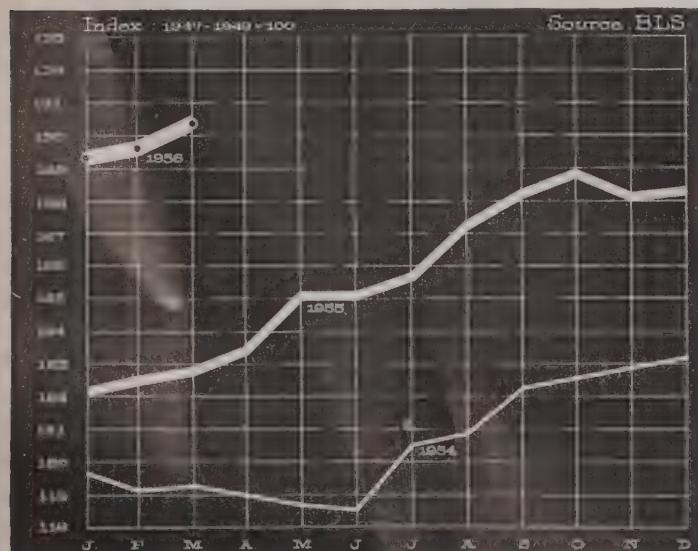
When FHA's Washington office discovered this, out went an order to 75 field offices: MPRs require 1" boards to conform to ALS standards (i.e. 25/32"). FHA Director Guy Arrington in Portland, Ore., heart of the west coast lumber empire, read the edict, blinked, gulped and dutifully ordered construction halted on FHA houses going up with non-conforming 3/4" boards (normally used for sheathing, roofing and subflooring).

When the outraged cries of Oregon home builders reached Washington, Sen. Wayne Morse (D, Ore.), who is running for re-election, took the floor of Congress. "Height of bureaucratic assininity," he cried.

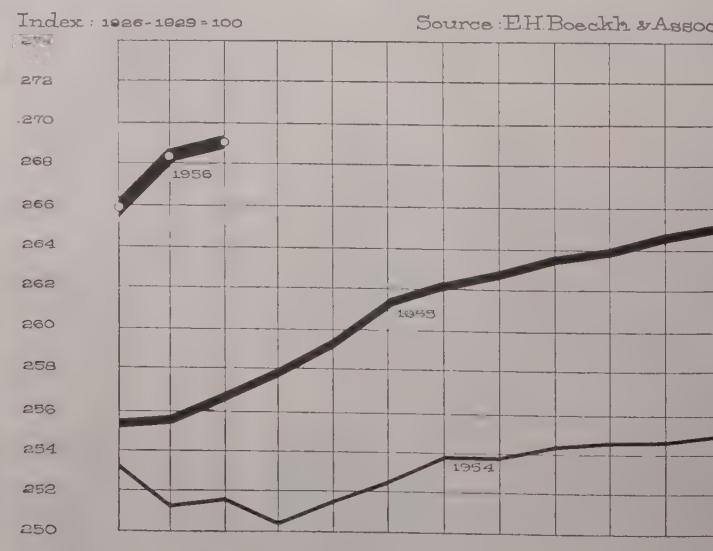
Flying peace makers

Next day, FHA Commissioner Norman Mason, a lumber retailer by trade, hurried up to Capitol Hill to try to convince the inquiring Senate banking committee that it was

continued on p. 73



Materials prices jumped another 0.6% in March—from 129.6 to 130.4 on the Bureau of Labor Statistics' 1947-9 based index. The new all-time peak leaves materials prices more than 6% above their March 1955 level—and still headed up. Biggest ingredient of March's increase was a 1.2% rise in the price index for lumber.



Boeckh's building cost index went up another point in March, from 268.2 to 269.2. Col. E. H. Boeckh attributed the rise to freight rate and wage increases. Noting that negotiations are currently underway in many areas for even higher wages, he predicted that building costs will go higher in the next few months.

continued from p. 70

all a horrible misunderstanding between FHA headquarters and FHA's Portland office. The senators seemed unimpressed.

Asst. Commissioner Charles Bowser, a home builder by trade, flew to Portland to make peace between FHA and builders. He labeled the hassle "a controversy on interpretation." Snorted one Portland lumberman: "Face-saving."

At mid-month, FHA about faced. From Washington came an order that FHA would accept $\frac{3}{4}$ " boards, seasoned or unseasoned, for at least 30 days. Meanwhile, FHA hopes the industry can agree on a new standard. That may not prove too easy. Southern pine producers are ready to adopt a $\frac{3}{4}$ " thickness. But for dried lumber. To west coast producers, it means undried.

Court nullifies dry-wall ban in Detroit suburb

Detroit home builders won a sweeping court decision nullifying a ban on $\frac{1}{2}$ " dry-wall construction imposed by suburban Redford Township.

A Wayne county circuit judge ruled that the ordinance, enacted last September, was "arbitrary, unreasonable, unconstitutional and hence void."

The township had argued that its general police powers gave it the right to determine what building materials could be used. But it did not contend $\frac{1}{2}$ " dry wall endangered health, safety or general welfare.

Builders took the township to court through University Custom Homes, a subsidiary of the Edward Rose Co. It was the second suit brought by members of the Builders Association of Metropolitan Detroit.

The first, also litigated by Irvin H. Yackness, executive vice president and general counsel of the association, challenged validity of a Redford ordinance requiring a \$50 payment for parks in addition to each building permit fee. After three pretrial hearings, Redford Township repealed the ordinance on the eve of the trial.

Yackness' argument against the park fee—which builders elsewhere might well study—went like this:

1. Building permit fees may be used legally only to defray the expense of issuing the permit and inspecting the structure and operating the building department, but not to raise general revenues.

2. Facilities to be used by the general public, like parks and recreation areas, must be paid for with general taxes, not special assessments.

Cost breakdowns show where building dollars go

Who gets the lion's share of the cost of building?

Two new cost breakdowns, from Milwaukee and Chicago, demonstrate convincingly that wood—and wood workers—take the biggest slice out of the construction dollar. Milwaukee's survey (made for the local Society of Residential Appraisers) showed that a staggering 41.9% of the cost of a typical frame house (photo, p. 76) went for carpentry, lumber and millwork. Even in the solid masonry house selected as an example by Chi-

continued on p. 76

From the desk of Ed Devine, E.E.

To: M. G. Gordon, Sales Rep., Pass & Seymour, Inc.

Monty, can P+S solve these problems?

1. Need switches for those luxury homes in Danforth. Want to show quality of job with eye-catching, top quality wiring devices. Should be good enough for a sales feature, and show them we thought of details. By the way, keep the price down.
2. Need special, heavy-duty switches for factory job. 15 amps on A.C. current. Handle full rating up to 277 volts on fluorescent loads.
3. Looking for best three-wire grounding outlet for special equipment. Should be convertible to 2-circuit.
4. I bid low on residential job. Have to make profit in speed—cut down labor costs. Want to use the best. What about those screwless terminal jobs?

From the desk of... M. G. GORDON
To: Ed Devine

1. No problem here! Just use P&S ROTO-GLO®. Glows in dark, whisper quiet, exclusive roto action, has tremendous sales appeal. Only pennies more per switch.
2. P&S can do! Check specs on 15AC1 (single pole). Also check double pole and three-way versions. (Got them at 20 amp rating, too.)
3. The best in 3-wire is this 5262—easy back or side wiring. Grounding blade can't engage "hot" contacts. Converts to 2-circuit by breaking connection between binding screws.
4. P&S 1500 is the one to use! Perfectly insulated, with double, torsional contacts for low heat. Just two steps for fast, simple wiring (even has strip gauge molded in).

For the solution to all your wiring device problems send us a memo, or write today for the latest catalog to Dept. HH-12.

P&S PASS & SEYMOUR, INC.
SYRACUSE 9, NEW YORK
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compact

Partitions extruded of Monsanto's Lustrex Hi-Test 88 styrene by Curtition Corp., Los Angeles.

Unique compact-folding partitions now engineered in tough, colorful Lustrex* styrene plastic.

New latitude in designing for spacious living is provided by this most recent development in fold-away doors and walls—another practical example of plastics in housing.

A soft fluted effect is obtained when the doors or partitions are extended. The 12-in. widths compact to 1-in. thicknesses resembling graceful pillars. Wide range of Lustrex colors contrast or harmonize with any room decor.

Finger-tip operation, color interest, complete washability and a surface that always keeps its color and is resistant to common household acids and alkalies are among the qualities offered by the plastic materials from which the units are made. The panels, which come in a variety of heights and widths, are extruded of Monsanto's heavy-duty high-impact Lustrex

styrene (.060 thickness) and hinged full length with flexible vinyl (.020 thickness). Nylon rollers on every fold assure a nonsagging drape and smooth sliding on the steel track.

New developments in materials and processing techniques are rapidly broadening the uses of plastics in building and construction. Many of these developments are already appearing in homes across the country. Others—still in the exploratory stage—are a forecast of the innovations of the future.

Present and future uses of plastics in building are under constant study by our Structural Plastics Engineering group who will be glad to furnish assistance on how plastics may be designed into your structures.

New report. "Plastics in Housing," has recently been published by the Department of Architecture of the Massachusetts Institute of Technology. The M.I.T. study was made possible by a Monsanto grant-in-aid. Copies are available at \$2.00 each. Address Monsanto Chemical Company, Plastics Division, Room 504, Springfield 2, Mass.



*Lustrex: Reg. U.S. Pat. Off.



Lake Harriet Methodist Church, Minneapolis, Minn.: Architect, Loren B. Abbott, A.I.A.; Contractor, Kraus-Anderson, Inc.; both of Minneapolis, Minn.

For lasting good looks . . .

IT'S A COMFORTING FEELING . . . knowing your project will stay strong and attractive for generations. You gave it your best—and you're proud of it. You know its good looks will endure . . . and you're glad you specified Atlas Mortar Cement.

The air-entraining properties of Atlas Mortar Cement resist damage from freezing and thawing. That's why good-looking masonry made with Atlas Mortar Cement retains its handsome appearance for years.

BRICK, BLOCK AND STONE all look their best in a setting of Atlas Mortar Cement. Be sure to use it for your next project. Complies with all ASTM and Federal Specifications for masonry cement, which now include requirements for soundness (low expansion) in autoclave.

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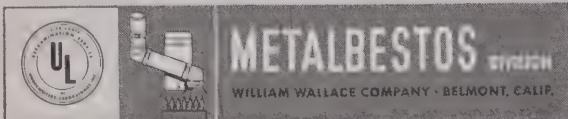
A Metalbestos gas vent specification

is your guarantee against fire and condensation hazards resulting from improper venting systems — your assurance of complaint-free venting for the life of your homes.

A Metalbestos gas vent installation

is a proven cost-saver because this insulated venting line of versatile, lightweight units permits rapid one-man assembly without cutting, fitting . . . cement or special tools.

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METALBESTOS — TO CUT COSTS, NOT CORNERS

Stocked by principal jobbers in major cities. Factory warehouses in Atlanta, Dallas, Newark, Des Moines, Chicago, New Orleans, Akron

"Here's building insurance with a low net cost"



Robert J. Boyd



APPRAISERS MODEL IN MILWAUKEE

cago Federal S&L Assn. these items totaled 30%.

Other healthy bites were taken by masonry (12% in Chicago, 11% in Milwaukee), plumbing (8% and 7%) and concrete (11% and 5%). Contractor's profit (sometimes thought by the layman to be in the 100% area) was practically the same in each city, 10% and 9%. The figures:

MILWAUKEE

Item	Cost	Per cent
Survey	\$ 27	0.11
Permit	11	0.06
Excavating	180	0.98
Masonry	2,080	1.11
Concrete work	965	5.3
Carpentry	2,281	12.5
Lumber	3,413	18.7
Millwork	1,950	10.7
Plumbing	1,350	7.4
Heating, sheet metal	867	4.7
Electrical work	425	2.3
Electrical fixtures	58	0.32
Insulation	140	0.76
Drywall	650	3.57
Weatherstripping	31	0.16
Painting	725	3.9
Hardware	163	0.89
Linoleum-Formica	182	1.0
Plastic tile, fixtures	128	0.7
Steel	90	0.49
Grading	100	0.54
Cleanup	40	0.21
Miscellaneous	50	0.27
Architect-blueprint	25	0.13
Overhead	900	4.9
Markup	1,407	7.7
TOTALS	\$18,187	99.4

CHICAGO

Item	Cost	Per cent
Excavating, grading	\$ 262	1.5
Concrete work	1,925	11.0
Masonry	2,100	12.0
Carpentry, lumber & millwork	5,250	30.0
Steel	175	1.0
Roofing	262	1.5
Sheet metal	175	1.0
Plumbing & sewer	1,400	8.0
Tile work	262	1.5
Plastering	1,050	6.0
Heating	875	5.0
Electric work, fixtures	612	3.5
Glazing	262	1.5
Painting, decorating	612	3.5
Other expenses	525	3.0
Profit	1,750	10.0
TOTALS	\$17,500	100

Antitrust suit attacks American Radiator merger

Merger of American Radiator & Standard Sanitary Corp. (American-Standard) and the Mullins Manufacturing Corp. (Youngstown Kitchens) ran afoul of an antitrust suit by the Justice Department.

Antitrust Chief Stanley Barnes contends the merger will stifle competition because American-Standard was already the largest maker of bathtubs and sinks in the country. In 1954, it produced 40% of the cast-iron bathtubs, 38% of the cast-iron sinks. Mullins made 30% of the steel kitchen cabinets, 18% of steel sinks that year. The company plans to fight.

NEWS continued on p. 80



4. CUTS INSTALLATION TIME 50%

With Temlok Roof Deck, four men can cover a 30' x 40' roof in 7 hours, compared to 14 hours with conventional materials. Big labor savings are possible because 16 sq. ft. of roof deck, insulation, vapor barrier, and finished ceiling are installed each time a 2' x 8' Temlok board is nailed to the beams. Your savings in time and labor with Temlok Roof Deck can cut your costs up to \$250 per house.

5. HELPS YOU SELL HOUSES FASTER

The attractive open beam ceiling created by Armstrong Temlok Roof Deck provides a distinctive and spacious appearance to your houses. It will appeal to modern and traditional tastes alike. Also, you can tell customers that the insulating value of Temlok Roof Deck keeps fuel and air-conditioning costs low. The beauty, comfort, and value of a house built with Temlok Roof Deck mean faster and easier sales for you.

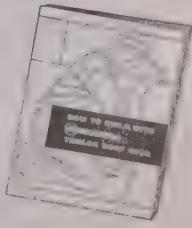


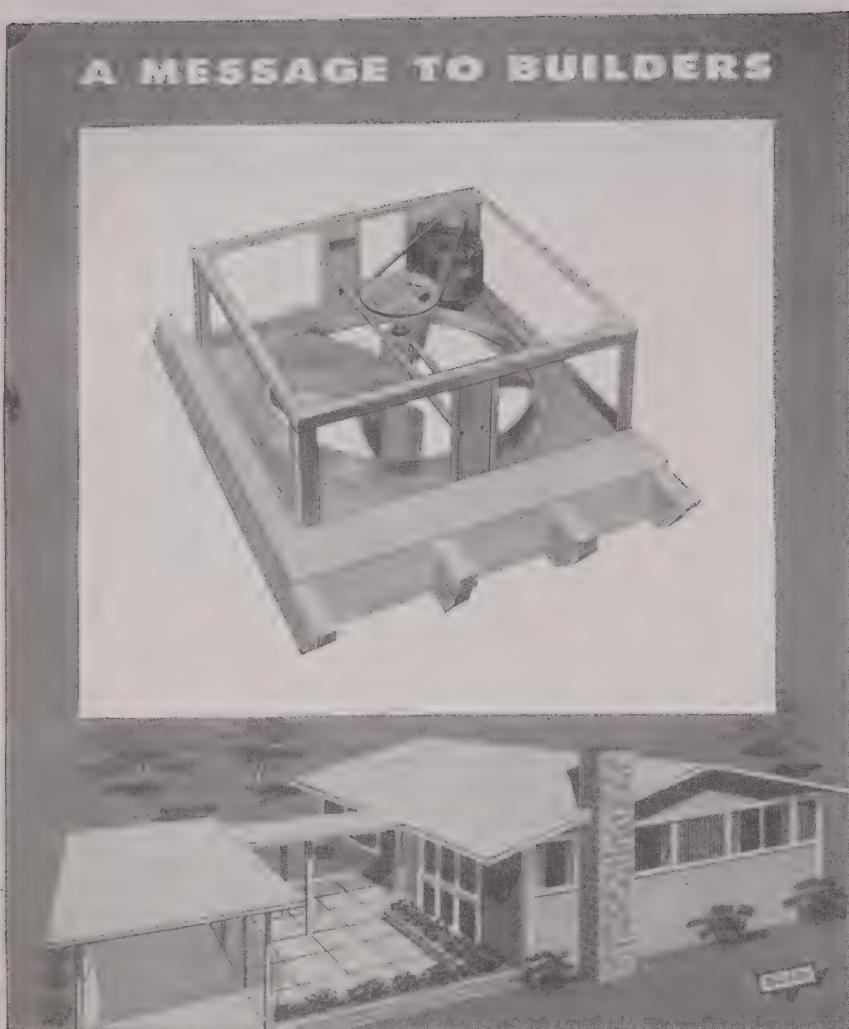
Plan your 1956 homes with

Armstrong BUILDING MATERIALS

Temlok® Roof Deck • Temlok Sheathing • Temlok® Tile • CushionTone® Ceilings

For free booklet that shows you how to build profitably with Temlok Roof Deck, write Armstrong Cork Company, 3505 Sixth Street, Lancaster, Pennsylvania.





**Your homes will sell faster with
a LAU *"NITEAIR" FAN
installed at the building stage**

For complete, economical comfort cooling there's a LAU fan to fit every home you build. The LAU "Niteair" Rancher Fan for homes with low-pitched roofs, comes in five sizes, from 22" to 42" with air deliveries from 3800 to 11,929 c.f.m. They're adaptable for a wide variety of installations. These fans add selling appeal to every home with bare minimum of cost increase. See your Lau fan representative. Get the facts!

Write for interesting information regarding Air-Conditioning "relief" fans. Amazing cost savings plus increased efficiency in dual installations.

STEVE ALLEN WILL SELL LAU FANS IN 1956
OVER THE NBC NETWORK, COAST-TO-COAST

tonight

*Niteair Trade Mark Reg.

LAU FANS • Division of the Lau Blower Company
DAYTON 7, OHIO

Other plants in Kitchener, Ont., Canada and Azusa, California

**National Homes increases
prices 3% on all models**

National Homes Corp., largest of the nation's prefabricators, raised the price of all models 3% last month—on top of a 1½% boost last September.

President James R. Price revealed one reason in his annual report: 1955 sales (22,866 units, \$64 million) were up from 1954 (20,203 units, \$55.8 million) but profits shrank. Earnings per share were \$2.02 in 1954, but only \$1.79 last year.

Price blamed the drop in profit on costs of rapid expansion and the rising costs of building materials, notably lumber, copper tubing and glass.

FHA FOR FACTORIES?

**Mortgage insurance urged
for surplus area plants**

Should the federal government write mortgage insurance for industrial building in labor surplus areas?

The Society of Industrial Realtors, a NAREB affiliate, thinks the idea is worth considering. Its leaders have already met with Raymond J. Saulnier of the White House Council of Economic Advisors to try to sell the scheme to the administration.

The realtors think the FHA way of doing things is better than direct US loans to industrial foundations and others in such regions. The administration's pending bill to spur industrial growth in such areas would authorize government lending.

**FHA acts to break logjam
on co-operative housing**

FHA has begun to ease some of Congress' ham-handiwork that choked off cooperative housing.

The agency revised its regulations on cost certification under Sec. 213. It is now possible, with some restrictions, for a co-op mortgagor corporation to sign a lump sum construction contract with a builder.

Where an identity of interest exists, the post-608-scandal law still requires cooperative sponsors to certify their actual costs. But FHA's new rules define conditions under which FHA can hold that no identity of interest exists. The new rules will help most in New York City.

**Women's housing congress
draws congressional fire**

Even before HHFA's three-day Women's Congress on Housing was held, it became controversial. Most outspoken critic, Rep. James M. Quigley (D, Pa.), rose up in the House to call the meeting "ridiculous" and "a sample of Madison Ave. huckstering."

HHFA Administrator Albert Cole, who conceived the idea of inviting 100 housewives to Washington at government expense (probably under \$20,000), defended his plan. "Women's views," he contended, "should have a strong impact on government housing regulations and attitudes."

NEWS continued on p. 85

URBAN RENEWAL:

The story of Seattle's Queen Anne Hill— OHI becomes a weapon against slums

Is Operation Home Improvement succeeding where others have not in galvanizing aging neighborhoods into community action to halt the creep of slums?

In Seattle, which OHI leaders consider their No. 1 pilot city, first results provide hope

that building men are beginning to learn this secret of unlocking the enormous potential of the housing fix-up market.

And they're learning that the real secret should have been no secret at all. All that was really necessary was to show the people what had to be done and how to do it. They will do the rest themselves.

Major housing goal

To prod this spirit into a frenzy of activity was the target President Eisenhower had in mind this winter when he put down as one of the three major goals of his administration, the "renewal and restoration on a national scale of old but still sound dwellings." The president made the point in giving his blessing to OHI (Feb., News)—a zippy and frankly commercial campaign financed largely by materials producers under the slogan and emblem (cut, above): "56—the year to fix."

One good example of a neighborhood comprised of "old but still sound dwellings" is the Queen Anne Hill section, just northwest of the downtown Seattle business district. The neighborhood flowered during the turn of the century. Along the brow of the hill, wherever there were commanding and beautiful views across Puget Sound, many of Seattle's finest families built elaborate mansions and the area could long claim the description "exclusive."

Age and the race to the suburbs began to catch up to Queen Anne Hill, however. Today, populated by families in the lower-middle and middle income brackets, it is a neighborhood aging and ripe for decay.

Yet in addition to its fine, high hill location, the neighborhood does boast certain assets. It has a lovely, broad boulevard, a modernized high school and an excellent city park with a field house and playground. In its middle-income, home-owning residents there was that potential of a strong neighborhood spirit which needed only a spark to ignite. OHI seems to have been that spark.

The Queen Anne Community Development Committee—a group of housewives, businessmen and neighborhood civic leaders searching for a better way to stir their neighbors into action—seized upon OHI as a means of improving not only their homes but the whole community. OHI did not come to them. They came to OHI after reading about it in the newspapers and asked for help.

Seattle's OHI committee and its head, Bob Blackstock, 32-year-old lumber executive, agreed wholeheartedly. When they went into the Queen Anne Hill area, they found an electric response. In less than two months the community and OHI could point to the fol-



lowing accomplishments:

► To dramatize the fixup theme, the University of Washington's public opinion laboratory was recruited to draft a questionnaire on what householders thought of their homes and neighborhood. Four hundred Queen Anne volunteers took it to householders in a 4,000-stop door-to-door survey (see below). ► To stimulate initial interest, the OHI committee offered a free home overhaul to the author of the questionnaire pulled out in a raffle drawing. The neighborhood committee chipped in with two \$50 bonds for second and third prizes.

► Virtually the entire neighborhood crowded into the Queen Anne field house one evening in April to see the prize won by Janet Hinch, 27-year-old wife of a commercial artist and mother of four children.

► More of the same neighbors gathered around the Hinch home later in the same week when a small army of roofers, insulators, painters, bathroom fixture men and landscapers moved in to work a \$6,000 transformation on the Hinch home.

► There's a large sign standing at the neighborhood's most important intersection, listing a series of community projects including cleaning up vacant land and demolition of an

old rat-infested barn. As each job is accomplished it will be painted off the sign.

► The house fixup drive led businessmen to start their own improvement campaign with entire blocks of buildings getting a new-look treatment.

Keeping a neighborhood young

Says Mrs. Rita Ryder, wife of a telephone company employee and chairman of the improvement committee: "We've been looking at ourselves for the first time. And the exciting result is that we of this neighborhood have decided we aren't going to let it grow old with our houses."

There is, though, little question that some of the motivation for the neighborhood improvement sentiment is coming from a conviction that continued, unchecked deterioration might invite racial transition. Every older neighborhood in Seattle is aware of the experience of the Denny-Blaine district, one "better section" where the press of Negro housing needs has been bringing changes that churches, the Urban League and others have been striving valiantly to see through in an enlightened manner.

On the other hand, the bulk of the leadership on Queen Anne Hill has come from citizens interested in neighborhood preservation and improvement without reference to racial segregation.

Home owners, time after time, are showing real interest in improving their homes and neighborhood. Experience with the University of Washington's questionnaires is a case in point. University tabulators expressed surprise at how frankly many residents criticized their own homes.

In a pre-test, tried on 38 homes owners who rated their dwellings on 13 points to show where improvement was needed, three

continued on p. 88

Herbert Bruce Gross

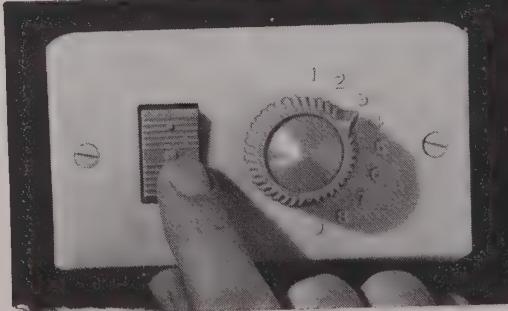


Nation's biggest housing center rises in Los Angeles

The new \$5 million, 13-story Building Industry Center, to be built by the NAHB-affiliate Building Contractors Assn. of Los Angeles, represents a radical break with the current vogue for all-glass facades. The structure, designed by John C. Lindsay, AIA, will make use of 8' wide wall panels running from top to bottom of the building alternating with 30" wide glass panel vision strips. Arch-topped structure at right will house a graphic arts display. Building exhibits will be contained in the elliptical tower in foreground. The building, twice the size of NAHB's new housing center in Washington is expected to become headquarters for construction trade associations and unions. It is scheduled for completion in September, 1957.



Add the sales-making excitement of **G-E Remote-Control Wiring** for as little as \$35 per house



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throughout the country about \$35 to \$70 per house more than conventional wiring. Where else can you find such an exciting sales feature at such low installed cost?

For complete information about G-E remote-control wiring, ask your electrical contractor, or write to Wiring Device Department, General Electric Company, Providence 7, Rhode Island.

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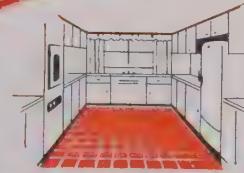
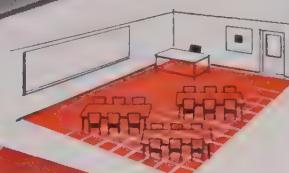
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Tex., Waco — Waco Glass & Mirror Co.
Tex., Wichita Falls — Wichita Glass & Mirror
Utah, Salt Lake City — Olympia Sales Co.
Va., Norfolk — Construction Supply Corp.
Va., Richmond — Building Products, Inc.
Wash., Seattle — Horizon Supply Company

fourths called their homes above average but none gave his home top rating on all 13 items. Only one rated his home tops in more than half.

Huge market revealed

First analysis of the complete results of 2,100 questionnaires shows what a market potential OHI can tap. Most home owners listed condition of their grounds, exterior paint and bathrooms as calling for fixup and refurbishing.

Given a chance to rate the various parts of their home as to low, medium or high, more than 68% of the householders called outside paint no better than medium. Almost 50% took this same dim view of the insulation in their dwellings. Ratings were almost equally low for kitchens and bathrooms.

If Queen Anne Hill is an accurate barometer, then the item in most satisfying shape around the US home is the chimney.

In general, 47% of the home owners felt their homes are in high quality condition. Less than 6% noted a dismal low.

The Queen Anne Hill program has already brought inquiries from 100 other cities. In Seattle itself, businessmen have pledged \$65,000 to help finance similar programs in 28 other local neighborhoods.

Committee Chief Blackstock, who admits to being a little amazed by it all, thinks OHI has learned a very valuable lesson. Says he:

"We did not get across through papers, radio and TV that this was something more than a commercial enterprise. It's unbelievably simple but the difference in the case of Queen Anne Hill is that they came to us instead of our going to them."

"The newspapers and the rest adopted the attitude when we first started on Queen Anne Hill that we had moved into a community with a high pressure campaign and were using the community to our advantage."

"Not until it dawned on us to point out that the Queen Anne Hill people took the initiative themselves did non-industry community elements sit up and take notice. Then OHI really began to roll."

How to fight gyppos

OHI leaders avoided denouncing gyp contractors publicly despite evidence they tried to capitalize on the drive. Blackstock says he did not want to start the drive on a negative note.

He is warning suede shoe operators to stay out.

Blackstock was called away from his dinner table one evening by a telephone call from a Queen Anne Hill home owner who reported that a man who lacked any credentials was there "to collect the questionnaire."

Blackstock asked caller to stall the man. He drove over to the caller's home.

"I told the guy to stay off the hill or we'd publicize him right out of Seattle," he said.

Blackstock, 6' 2" tall is an ex-Marine.

The man hasn't returned to Queen Anne Hill yet.

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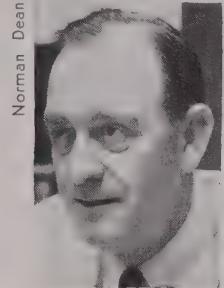
PEOPLE: John Austin and John C. Hall to head MBA; FHA gets its first woman district director

President **John F. Austin Jr.** of Houston's **T. J. Bettes Co.**, the nation's biggest mortgage banking firm, will be the next president of the Mortgage Bankers' Assn. and **John C. Hall** of Birmingham, Ala. will be vice president.

Their nominations—tantamount to election—were announced last month by MBA. The



AUSTIN



HALL

Norman Dean

was elected cashier and a year later vice president of the South Texas Natl. Bank at Houston.

Austin joined T. J. Bettes as executive vice president in 1948 (after a wartime stint in the Navy), moved up to president when Bettes died. The company, growing at a fast clip, now operates in four states (Texas, Oklahoma, California and Arkansas) and Honolulu, services a portfolio of about \$800 million in mortgage loans. Between flying around his mortgage empire and making frequent talks to industry and civic groups, tireless John Austin manages to squeeze in an occasional game of tennis. Once a year he goes deer hunting in the hills north of San Antonio.

Hall, 51, is president of Cobbs, Allen & Hall, Birmingham mortgage banking firm which services \$59 million of loans, originated \$13,800,000 last year. Georgia-born, Hall started his lifelong mortgage career in Birmingham with The Jemison Companies after graduating from Georgia Tech (he is still an ardent Monday morning quarterback). In 1932, Hall joined Metropolitan Life Insurance Co. as southeast mortgage supervisor. In 1946, he was one of the organizers of the firm he now heads.

Active in developing Birmingham's lush Mountain Brook residential community, Hall

was its first mayor pro-tem, a council member for 10 years after its incorporation. He was president of the Birmingham Real Estate Board in 1948, won MBA's distinguished service award in 1952.

Mrs. Faye Hartman, 42, became the first woman director of an FHA district office.

Mrs. Hartman, a divorcee, succeeded **Walter L. Forward Jr.** as FHA boss in San Diego, Calif. He resigned to join a San Francisco firm.

Missouri-born Mrs. Hartman, a San Diego resident since 1939, came to FHA from the Public Housing Administration. As a special assistant to PHA Commissioner **Charles Slusser**, she directed disposition of government-owned World War 2 defense housing in San Diego County for the last two years.

The area had the nation's largest concentration of these temporary and permanent dwellings. Easiest part of getting the government out of the landlord business, she discovered, was selling the units to occupants. The big hurdle was getting San Diego, which is fussy about housing and community facilities standards, to accept the wartime plumbing, and low-standard streets and curbs in the



MRS. HARTMAN

vice president (Austin is now serving in that post) succeeds to the top job next year.

Austin, 47, began his banking career with The First State Bank in Frankston, Tex. after graduating from the University of Texas and Rutgers' graduate school of banking. In 1937, he became a state bank examiner in Texas, later served as senior bank examiner for the Federal Reserve Bank in Dallas. In 1942, he

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Ezra Stoller



AIA awards—Oscars of architecture—honor five distinguished houses

Five houses will share in AIA's annual honor awards—the Oscars of US architecture.

AIA's five-man jury (Pietro Belluschi, Eero Saarinen, Paul Thiry, Donald S. Nelson and George B. Allison) picked one house among five buildings for First Honor Awards: glass-walled luxury house at New Caanan, Conn. (left) designed by Architect Philip C. Johnson for TV-man Richard Hodgson.

By ironic coincidence, almost at the same time he was planning the prizewinning house Johnson was having much trouble passing the design examination of the architectural registration board of Connecticut.

Runaway contest winner was the San Francisco firm of Wurster, Bernardi & Emmons. It won a First Honor Award for its \$258,000 Center for Advanced Study in Behavioral Sciences on a hilltop near Stanford University plus Merit Awards for two houses.



Wurster, Bernardi & Emmons call this rectangular house with a large overhanging roof at Stockton, Calif.—“a hot-climate house with a hat on it.”

Theodore Bernardi's informal redwood house he did for himself at Sausalito, Calif. → has hillside view, big wood deck ringed by live oak and eucalyptus trees.



Raphael Soriano of Tiburon, Calif. won Merit Award for this elegantly modern home → for Mr. and Mrs. Edwin Krause at Whittier, Calif. Contractor was J. Basso.

Reginald Caywood Knight (with Jasper Dudley Ward III as associate) won a Merit Award for this house for Mr. and Mrs. Walter P. Swain at Plainfield, N.J.



Julius Shulman





1. IT ALL STARTED IN CHICAGO at the NAHB show. Thousands of builders heard Perfection's extra profit story for the first time and the verdict was unanimous. "Here's a way to buy heating and cooling equipment that makes real sense!"



2. PERFECTION'S "BIG BOOK" TOLD THE STORY (the lady in white helped, too). The response to this new way to buy heating was so overwhelming that we're repeating it in these pictures.

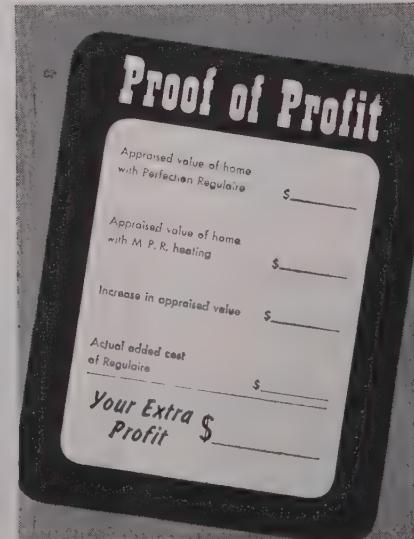
We repeat... BUILDERS GUARANTEE THEMSELVES AN EXTRA PROFIT ON EVERY HOUSE!



3. STOP trying to save a couple of bucks on buying furnaces. Start making a healthy profit on them instead. That's what Perfection says and here's the sure way to do it...



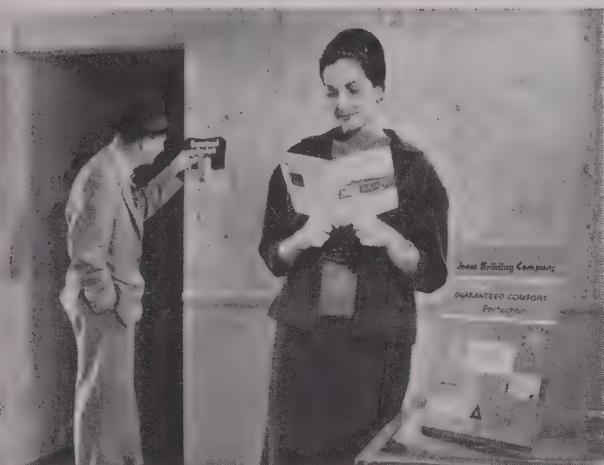
4. PUT IN THE FURNACE YOU CAN MAKE MONEY ON in more ways than one! That's a Perfection with Regulaire Modulated Heat... the only way to insure full-time comfort clear to the floor.



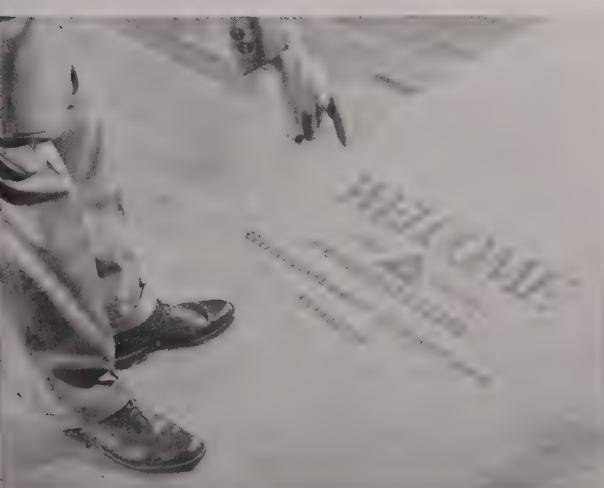
5. THERE'S NO MYSTERY about how builders can make extra profit with Regulaire. Houses equipped with Perfection furnaces bring a *higher* loan appraisal. You can figure out the profit for yourself.



6. BUILDERS CAN CASH IN ON THE SUMMER COOLING TREND, TOO. It's a big "plus" . . . a good tie-in sale. And besides, Perfection gives more cooling per kilowatt. Unique new method drastically cuts installation time and costs.



8. FEATURING A BETTER FURNACE can help you sell the house. It's happening every day with Perfection with Regulaire. And you get an extra selling push when you use the unique "Guaranteed Comfort" home-selling aids offered only through your Perfection dealer-contractor.



10. WELCOME IS A GREAT WORD . . . and every prospective buyer that enters a "Guaranteed Comfort" home gets a warm welcome the minute the front door is opened. Even the red sheathing paper that protects the floors says "welcome". It's all a part of Perfection's home merchandising program for builders.



7. GREAT NEW HOME SELLING IDEA helps sell homes faster. "GUARANTEED COMFORT" assures prospects that *their* welfare is a prime consideration. Builders automatically qualify for this "hot" new promotion by using Perfection Regulaire equipment . . . engineered, figured, installed and serviced by local Perfection *guaranteed* dealers.



9. FIFTY PERCENT OFF. Perfection Regulaire furnaces and cooling units are furnished for model homes at exactly *half* the regular cost. (How many model homes will you have?)

Simple story, isn't it? But a sweet one for every builder! What it adds up to is EXTRA PROFIT in your pocket on every Perfection Regulaire furnace you put in . . .

• A NEW HOME • A MODERNIZATION JOB

Start *making* money on the furnaces in *your* homes. See your Perfection dealer or write to Perfection Industries, Division of Hupp Corporation, 7706-B Platt Ave., Cleveland 4, Ohio.

TALK TO

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AUTOMATIC HEATING / SUMMER COOLING



continued from p. 91



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biggest project, 5,000-unit Linda Vista.

Other FHA personnel changes: **Russell M. Bailey**, 58, vice president of McFarland & Kennedy, Inc., Omaha real estate firm, was named FHA chief for Nebraska, succeeding **R. C. Hastings**, resigned. Lawyer **Martin H. Moyer**, of Jacksonville was appointed FHA director for northern Florida succeeding **Huber C. Hurst** who was named Jacksonville postmaster. **Charles L. Pape**, 43, for the last ten years chief underwriter for FHA's New York City office, quit to join the state housing division as mortgage consultant. **Robert W. Jefferson** of LaGrange, Ill., accounting and tax authority with Price Waterhouse & Co., was named director of examination and audit. He replaces **Charles S. Mattoon**, who became assistant commissioner for operations in December (Jan., News).

Nersica, remodelers group, gets new managing director

Don C. Lingenfelter, 57-year-old New Jersey fixup contractor, was named managing director of Nersica Inc., national association of home improvement men. He succeeded **C. N. Nichols**, 68, retiring after 14 years as Nersica chief.

Lingenfelter has been head of Home Modernizers Inc., Roselle Park, N.J. since 1930. He was one of Nersica's founders in 1934, its president in 1946 and since then has been treasurer. He turned over management of his firm to key employees.

Howard Ahmanson, biggest S&L operator, gets bigger

Howard Fieldstead Ahmanson, the biggest savings and loan operator, got still bigger.

Pasadena S&L Assn. (assets \$82 million) voted to merge with his Home S&L Assn. of Los Angeles (assets \$313 million), already the world's largest. The Pasadena firm becomes a branch of Home S&L. Pasadena President **John L. Launa** is retiring and Vice President **Lorne M. McCallister** is becoming a vice president and Pasadena manager of Home.

Pasadena was the sixth S&L acquired by Home since 1950. The merger gives fresh evidence of the western trend toward formation of savings and loan empires (News, March '56).

Ahmanson, president and sole owner of Home S&L, has been expanding fast in recent months. He is also:

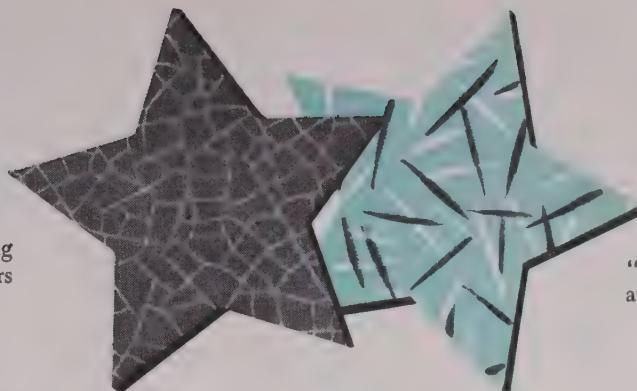
- President and sole owner of H. F. Ahmanson Co., Los Angeles firm which writes more than half of all southern California fire insurance on homes and dwellings.
- Vice chairman of the California State Republican central committee and one of Gov. Goodwin Knight's closest advisors.
- Half-owner of an oil field in Bakersfield.
- Owner of some real estate in Las Vegas.
- Majority stockholder in National American Insurance Co. of Omaha, which his father founded, the family lost after his father's

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Murray Garret—Graphic



AHMANSON



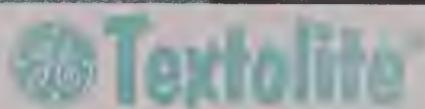
"CRACKLE"—a trend-setting pattern, in 6 gay colors

"HEYDAY"—a modern design, available in 5 gorgeous colors

General Electric presents...

2 NEW SALES "STARS" in the G-E Textolite line



 **Textolite**

PLASTIC COUNTER SURFACING

Here they are—"Heyday" and "Crackle"—the two great, new, G-E Textolite patterns you first saw previewed at the NAHB Show in Chicago last January. Like all G-E Textolite surfaces, they'll stay bright and beautiful, because they resist heat, stains, and scratches. And, with Textolite on counters

and walls—you can literally offer your prospects "years of wear—with minutes of care." Textolite wipes clean in a jiffy . . . needs no special maintenance! So, whenever you want the practicality of plastic, plus long-wearing beauty—be sure to specify G-E Textolite surfacing.

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OVER 75 PATTERNS AND COLORS
are yours with G-E Textolite! Woodgrains, Marble designs . . . and special G-E patterns like Medley, Ming, and Cross Current, are all highly styled to appeal to your prospects—and to help make that sale—right in the kitchen.

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Please send me the new 1956 full-color booklet with a complete selection of G-E Textolite patterns.

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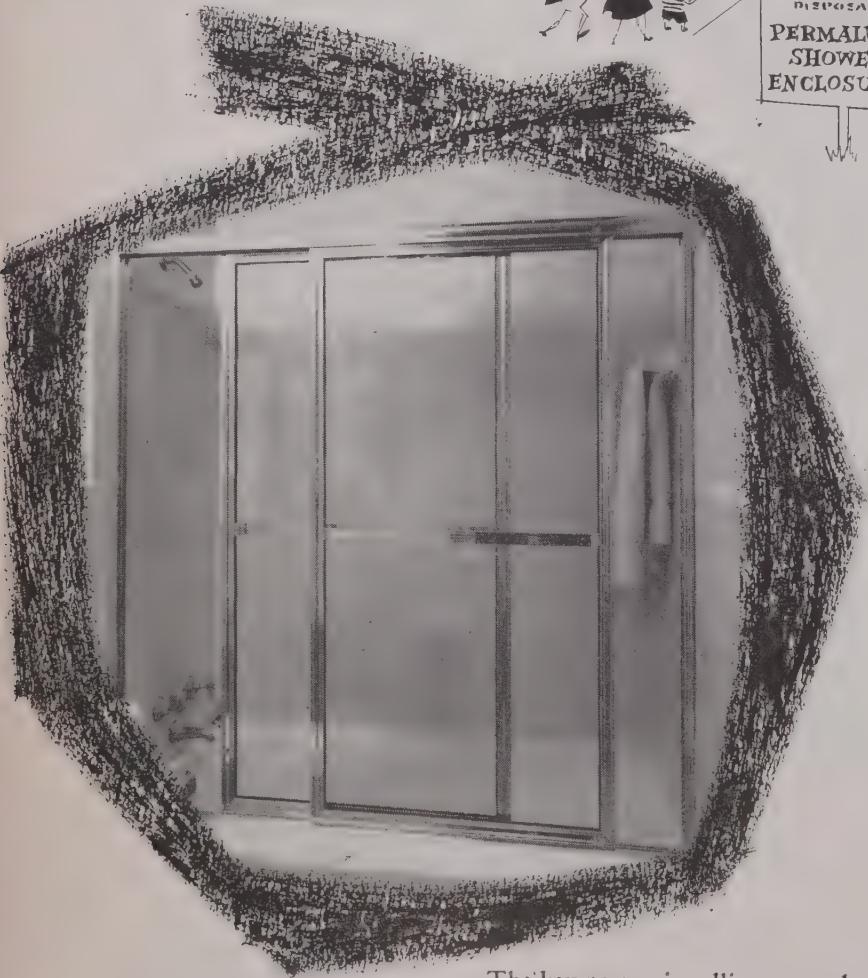
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GENERAL ELECTRIC

continued from p. 94

the house with the Best Features

Sells Faster



The key person in selling a new house

is the wife. The key room in her decision is *the bathroom*.

Nothing you put in your house will hit the housewife

where she lives like—Permalume Shower Enclosures.

Nothing moves houses faster than—Permalume Shower Enclosures.

There is a Permalume enclosure for *every* tub, *every* house, *every* bathroom.

Permalume Shower Enclosures are made by Shower Door Company of America—the world's largest manufacturer of shower doors, tub enclosures and daylight shower stalls. All Permalume enclosures are unconditionally guaranteed for 17 years.

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WORLD'S LARGEST MANUFACTURERS OF SHOWER ENCLOSURES

death, and Ahmanson bought back.

Omaha-born Ahmanson, now 49, came to California at 17 with \$20,000 he had earned, parlayed it into \$1 million before he was 30 selling fire insurance. He bought Home S&L in 1947 "when I kind of got bored." He paid something over \$100,000 for the conservative old firm (it had assets of about \$960,000, capital about 10% of that). In 1955, Home netted over \$9 million—a figure Ahmanson rolls off his tongue with pride.

Over a year ago, Home began to reduce its heavy involvements in housing developments. Ahmanson figured that nothing-down terms had so stimulated output that sales would get risky.

Ahmanson believes business is fun. "And when you make a lot of money at it," he says, "it's even more fun."

Winners named of four top AIA medals

Four Americans distinguished in arts and architecture will receive awards from the American Institute of Architects at its Los Angeles convention this month:

Clarence S. Stein, 73, New York architect and internationally celebrated land planner, will get AIA's highest award, the Gold Medal (for more details, see p. 169).

Theodore Irving Coe, FAIA, technical secretary for AIA in Washington, will receive the Edward C. Kemper award for outstanding contributions to the architectural profession or the Institute. A member of the AIA staff for 20 years, Coe edits the AIA standard filing system and alphabetical index, represents AIA in technical work with other trade groups. He is chairman of the board of zoning adjustment for the District of Columbia.

Mrs. Hildreth Meiere, New York mural painter and designer, will get the Fine Arts Medal, AIA's highest honor for nonarchitectural arts.

The Craftsmanship Medal will go to **Harry Bertoia**, Italian-born abstract sculptor, furniture designer and painter. Most spectacular of Bertoia's metal-sculpture murals—for which he is best known—is one 70' long and 16' high on the main floor of Manufacturers' Trust Co.'s new glass-walled bank in mid-Manhattan.

AIA picks winners in contest on architectural journalism

AIA named seven prize winners in its third annual architectural journalism competition—three of them *HOUSE & HOME* correspondents.

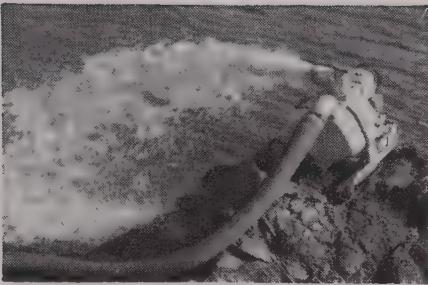
First award for the best factual reporting on an architectural subject or personality in the news columns of a paper went to Real Estate Editor **John Senning** of the *Miami Herald* for his story, "Architectural Board Begins Design Work on Interama." Senning, *HOUSE & HOME*'s Miami area correspondent for the last several months, joined *HOUSE & HOME*'s New York staff last month as an associate editor.

As the best feature story on an architectural subject or personality in a newspaper, newspaper supplement or newspaper magazine, AIA picked a piece by Associate Editor

NEWS continued on p. 103

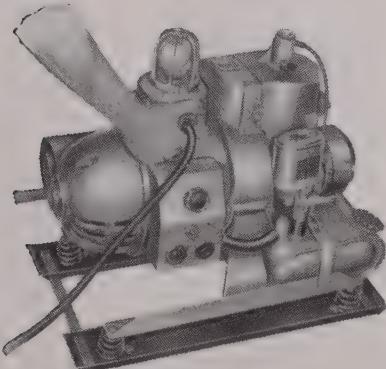
continued from p. 98

CHOOSE from a full line of **HOMELITE** Carryable Construction Equipment



SELF-PRIMING CENTRIFUGAL AND DIAPHRAGM PUMPS

Sizes: 1½" to 3" — capacities to 15,000 g.p.h. for dewatering and water supply.



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Complete range of sizes and voltages up to 5,000 watts.



LIGHTWEIGHT POWERFUL ONE-MAN CHAIN SAWS

Complete line of saws with clearing and brushcutter attachments for every woodcutting job.

HOMELITE

A DIVISION OF TEXTRON AMERICAN, INC.
PORT CHESTER, N. Y.

Douglas Doubleday of the St. Petersburg Times (and H&H correspondent) titled "To Measure a Florida House. . . . Use a Florida Yardstick."

Grady Clay, real estate editor of the Louisville Courier-Journal (and H&H correspondent) was accorded honorable mention for the best article in a nonprofessional architectural magazine on an architectural subject or personality for his story, "No More Chinese Walls in Louisville" which appeared in Arts in Louisville last November.

Other winners: Pietro Belluschi, dean of the MIT architectural school, whose article, "The Meaning of Regionalism in Architecture" in Architectural Record, was judged the best in a professional architectural magazine; John Normile and Curtiss Anderson, whose story, "The Idea Home of the Year" in Better Homes & Gardens, was judged tops in a nonprofessional architectural magazine; Orin A. Sealey, whose photo of Hampden Hills Church in the Denver Post was picked as the best photograph of an architectural subject in a newspaper; Rene Burri of Zurich, whose photo of Le Corbusier's Notre Dame Du Haut church in Architectural Record was judged the best architectural photo in a magazine.

NAHB picks 17 to make tour of Russian housing

NAHB picked 17 builders to make the coveted tour of Russian housing next month: President Joe Haverstick, ex-President Earl Smith, John Worthman, S. N. Adams, Tom Coogan, Hans Heymann, Arthur Oman, Carl T. Mitnick, Harry A. Boswell Jr., Edward W. Pratt, Martin Bartling Jr., Irving C. Jordan, August Rahives, Leslie Hill, Bertram Druker, William H. Dolben Jr., and Public Relations Chief Bob Loftus. It was Loftus who suggested inviting Russian housing men to visit the US last year. They will be accompanied by Interpreter Vladimir Pojidaeff, a British subject who translated during the Russian visit here.

DIED: Louis Liebersohn, 50, co-founder and partner of the Northwest Wall Paper & Paint Co., March 10 in Washington, D. C.; Will H. Reno, 82, Los Angeles building contractor and pioneer developer, March 11 in Los Angeles; Arthur E. Fowle, 85, a founder of the Libby-Owens-Ford Glass Co. and active vice chairman of the advisory committee of the First Western Bank & Trust Co. of San Francisco March 14 in Los Altos, Calif.; Louis B. Altreuter, 69, realty appraiser and vice president of Manhattan's East River Savings Bank, March 14 in Upper Montclair, N. J.; George Lewis Curtis, 77, board chairman of Curtis Companies Inc., woodwork and window manufacturers, March 17 in Clinton, Iowa; Andrew N. Wangstad, 73, one of Minneapolis' dozen largest home builders and an organizer (in 1926) of the Minneapolis Home Builders' Assn., March 24 in Minneapolis; Carroll Adams Cook, 62, president of Sacramento Savings & Loan Assn. and of Artz & Cook, realtors, April 3 in Sacramento, Calif.; Builder Lionel J. Tilson, 41, head of Tilson Homes Inc. of San Jose, Calif., killed April 2, in crash of his private plane near San Miguel, Calif.; Hugh Gallaher, 62, vice president of Penn Metal Co., Inc. of New York, April 3 in New York; John P. H. Perry, 73, former vice president and director of Turner Construction Co. of New York, April 14 in New York.

NEWS continued on p. 106

AMWELD STEEL DOORS, FRAMES AND CLOSET UNITS

13/8" and 13/4" Flush Doors

11/8" and 13/4" Inter-Lok Frames

Sliding Closet Units

Fire Doors

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Vision Panel,
and Pierced
Louver Doors

Amweld's low original cost, coupled with an easy installation which can save up to 60% total cost, plus minimum maintenance call-backs, assure builder profit and customer satisfaction. No matter what's on your drawing board to build or bid — homes, motels, commercial or office buildings, schools or apartments — the Amweld line should be part of these plans.

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* **it's enough to make your**

**... one new
appliance
can do it!**

Sad, isn't it — when a modern home becomes electrically out-of-date through the addition of just *one* major appliance. Yet it happens every day all over the country!

Homeowners—more than 34,000,000 of them — have discovered how important it is to have a home wiring system that will stand up under the load of present-day electrical living. An adequate



homes grow old overnight!

service entrance, plenty of circuits and outlets and strong, copper wires all add up to a convenient, *comfortable* home.

Plan your own homes for power — *and plenty of it*. Specify at least a 3-wire, 100-ampere service. Remember to include an abundance of outlets. Insist on an adequate number of circuits — plus *extra* circuits for the house "to grow on!"

Such planning not only makes your houses easier to sell — it also adds to your reputation as a builder of *quality* homes!

Free Home Wiring Wall Chart! Send today for handy wall chart showing typical home circuit loads. Use it as a check list when planning home systems. Write Kennecott Copper Corp., Dept. H56, 161 E. 42nd St., New York 17, N.Y.



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OPINIONS:

These intellects shed the following light on matters of moment to housing:



Dean William W. Wurster of the University of California school of architecture:

"I hate the itsy-bitsy, teensy-weensy cute school of architecture. I suffer real distress when I see people plant a wagon wheel in their front yard. What has it to do with their lives or their times? If I ever do anything, I'll put an automobile wheel in front of my house."

John Engstead



Editor Elizabeth Gordon of *House Beautiful*, in talk to Southern Pine Assn.:

"We are entering a period so without precedent that our old methods and attitudes are a hindrance, perhaps even a menace. . . . Yet while an almost unbelievable ten-year surge in spiritual, cultural and physical progress has been going on, housing patterns have been kept from developing any normal curves. Ever since 1939, the government has so completely rigged the aids and controls that normal demand is an unknown quantity. The minimum house has been made—artificially—the hero of this period. . . . The home builder has been robbed of his self-confidence and feels that he must seek the minimum requirements in a house instead of using his own initiative."

"The people whose daily life is blossoming are not going to want to live in tiny, boxy houses. . . . They will want more beauty. And you can't wring beauty out of a box—no matter what color you paint it, or what decorations you paste, stencil or hang on its walls."

Indiana University



Dean Arthur M. Weimer of Indiana University's school of business, in *Savings & Loan News*:

"Competition is growing more intense in nearly all markets. . . . Builders are finding that prospective buyers are no longer attracted simply by new houses, but only by new houses that are attractively styled, efficiently arranged and provided with the best in up-to-date equipment. Buyers are growing more and more selective about location, and lot sizes."

The trend toward finer homes will spell obsolescence for many older residences and even for some built recently."

for *BUILDERS AT WORK*, see p. 110

Wall Treatment THAT MEANS SALES

Church Royalton Tile, 8½" x 8½" — four times the area of conventional tile — makes small rooms seem larger, gives any room a luxury look. The toilet seat is Church, too — the famous "best seat in the house." Fixtures, American-Standard.

Give your new homes this look of luxury — easily, economically — with Church Plastic Wall Tile . . . and watch Mrs. Homeseeker's eyes light up in a way that means sales!

Equally at home in kitchens, laundries, other rooms as well as bathrooms, Church Wall Tile is handsome, practical, easy to install — and surprisingly economical.

Walls need no expensive pre-preparation; on-site labor is kept to a minimum. And Church Tile is *quality* plastic wall tile — guaranteed in writing. Ask the dealer who displays this shield — or use coupon below.



C. F. CHURCH MFG. CO., Dept. HH-5, Holyoke, Mass.
Division of AMERICAN - Standard

Please send me illustrated literature and full information on Church Tile () Church Seats ()

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Address _____

City _____ State _____



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STYRENE WALL
"THE BEST SEAT IN THE HOUSE"®

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"THE BEST SEAT IN THE HOUSE"®

Upson delivers primed soffits, sheathing, interior walls, cut-to

primed soffits



Upson ships weatherproofed soffits from stock—already primed and pre-cut to *eight standard sizes* you can use. Slip them quickly into place and they are ready for finishing. No delays, no cutting and fitting at building site, thus saving you more money. Also supplied vented. Highest quality, lowest priced soffits on the market. Let us quote from your specs.

sheathing



Super-strong $\frac{3}{8}$ " Upson All Weather Sheathing eliminates corner bracing—saves \$35 to \$40 per house. Practically no waste. Eliminates need for building paper. And giant, wall size panels up to 8' x 20' apply faster, can save you even more. Every fiber in $\frac{3}{8}$ " Upson All Weather is waterproofed by exclusive Upson CuraSeal® process. Toxic treated to resist mold, fungi. Mail coupon for details.



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interior wa

Full wall size $\frac{3}{8}$ " Upson Strong-Bilt is stronger, lighter, permanent, crackproof! And full wall size mean no joints from corner to corner. $\frac{3}{8}$ " Upson Strong-Bilt is a beautiful material that adds style and appeal to any home. Warm to the touch, decorating possibilities are unlimited with paint or paper, valuable insulation and sound absorbing qualities. Fill out coupon today.

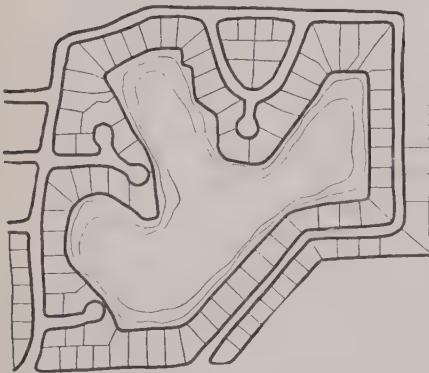
Upson

ceiling p
siding, sh

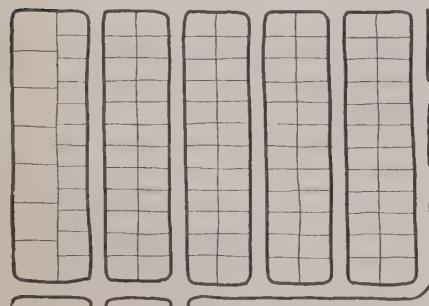
94% wood fin



Before: Abandoned quarry was incorporated in plat, but lots ranged from 75' x 100' to 2 1/2 acres.



After: Rock pit, renamed Sky Lake, will have safe swimming beach graded into the water. Lot sizes were made less varied.



Before: Rigid grid provided no visual interest along streets, permitted too many race-track entries from busy highway.



After: Curvilinear streets discourage all but local traffic and irregular lot shapes will prevent monotony.

Miami builder replats subdivision around rock-quarry lake for better land planning, gains 29 lots

Good planning, like virtue, can sometimes be its own reward.

Discarding the gridiron pattern of his 264 lot subdivision brought Miami Builder **David Fleeman** a double prize: 1) interesting lot shapes on traffic-safe curved streets, and 2) a bonus of 29 additional lots.

The gain was not at the expense of minimum lot sizes, which were raised from the Dade county minimum of 75' x 100' to 80' x 108'. In revising the original platting, Fleeman was able to eliminate a group of oversized, clumsy shaped parcels fronting on a 25 acre lake (formerly an abandoned rock quarry), reducing them to more uniform size and giving each plot access to the lake.

Sharply bent streets were dropped in favor of culs-de-sac that made the most of this prime topographical asset (man-made lakes, which used to be considered site handicaps, are now sought after by builders). Behind the lake, gently curving streets replaced ruler-straight roads of the original platting and provided irregular shaped lots. These will help landscaping for privacy, permit better orientation on lots to catch southeast breezes.

The subdivision fronts on one of north Dade County's most important thoroughfares, 183d St., soon to become a four-lane artery. The county prohibits homes fronting on the street, requires builders to create a parallel secondary road. Fleeman and his associates, **Allan Greenberg**, Architect **Igor Polevitzky**, FAIA, and Surveyor **Harry Schwebke**, rejected a secondary road on the ground it would tend to become a public

dump. Upshot: homes will face the other way and a 4' concrete-block wall 1,362' long, plus a screen of trees will act as a buffer between backyards and 183d St. This will reduce the number of access streets to the development and so cut through traffic.

For years, Fleeman had been putting up conventional Miami CBS rectangles. For his new development, Polevitzky is designing contemporary models with much emphasis on indoor-outdoor life. Fleeman plans to build about 200, priced between \$20,000 and \$25,000—all three bedroom, two bath with screen patio, open patio and family room.

It took Fleeman a year to replat the tract and steer it through county approvals. He considers it time well spent, because he thinks public resistance is mounting to projects of standard-design homes on gridiron plats.

Says Fleeman: "For years, the main area of competition between builders was on financing. The relative merits of the homes offered were secondary. All that has changed now."

PROGRESS REPORT:

Don Mills, model community in Canada, finds slow going

Don Mills, North America's foremost satellite city, is about 60% built—despite trouble with that old bugaboo, community facilities.

The development, 7 mi. northeast of downtown Toronto, is regarded in planning circles as a dream come true. Since it got underway in 1953 (H&H, July '54), this much has come true: 1,700 single-family homes (\$13,000 to

continued on p. 115



DON MILLS, SATELLITE CITY OF TORONTO (ON SKYLINE), REACHES 60% OF COMPLETION

continued from p. 110

\$30,000, with the average about \$17,000 last year), 70 duplex units, 800 rental units and a near-sellout on industrial acreage.

But delays by the four-levels of government through which development plans must filter in Canada have become—in the words of President **Angus McClaskey** of **Don Mills Developments Ltd.**—“our most serious problems.” Township, metropolitan, provincial and federal officials have various hands in approving or building roads, schools, sewer and water mains or mortgage financing. Planning for the \$28 million Don Valley Parkway held up the project six months last year, says McClaskey.

Gilbert A. Milne



McCLASKEY

With Don Mills overhead of \$2,000 a day, that was costly.

The developers have provided 28' paved roads, curbs and gutters, sanitary and storm sewers, catch basins, street lights and some sidewalks. North York township is supposed to maintain them. Don Mills found the municipality was slow in taking on this responsibility. To avoid absorbing the maintenance cost itself, Don Mills slowed its development pace.

It is noteworthy that Don Mills was one of the first big postwar developments to dodge design monotony by using many different architect-builder teams. Some 25 home builders are at work in Don Mills this year. To prevent a hodgepodge, Don Mills must approve plans for every house as well as its siting on the 60' lots. This stubborn insistence on high standards is aimed at keeping property values up for the long pull; the developers are relying on their shopping center as a major source of income. But McClaskey found some builders were slow to come up with plans he would approve. Recently, the company hired five architects to draw up a stockpile of house plans “to give more livability for the dollar.” When a builder comes in without a “suitable” plan, Don Mills can take one off its shelf; the builder will pay both the company and the architect. If the developers like any of the five designs enough (they are still being drafted), they may offer them to a builder for an entire section of the project.

Of the first 1,500 families to move in to Don Mills (its population is now 10,000), 52% had been renting and 36.4% sold homes elsewhere in the Toronto area. Average income: \$5,700 a year (median Canadian income is \$3,110, for families of two or more persons). Builder **Roy Rogers**, who is putting up what may be the only row-house split levels in North America, was surprised to find family income among his renters was higher; it averaged \$6,540—“so the reason they are renting is not necessarily because they can't afford to buy.” The split-level apartments have 1,700 sq. ft., rent for \$117 a month.

Television coverage set for AIA convention

AIA's convention in Los Angeles this month (May 15-18) will be on television from coast to coast.

continued on p. 117

FLATTER THE HORIZONTAL

with EXTERIOR FIR PLYWOOD

SPECIFY WIDE LAPPED EXTERIOR PLYWOOD SIDING to emphasize the long, low lines so popular with today's home buyers. Courses of 12, 16 or 24-inch widths add design simplicity, create a new and unusual “scale.” Exterior plywood siding is strong, splitproof. Goes up quickly. Cuts application time up to one-third. For really big savings, plywood can be applied directly to studs to eliminate sheathing cost entirely.

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For Outdoor Use, Specify EXT-DFPA® Exterior Plywood: 1. standard Plyshield® grade for soffits, gable ends and low cost siding; 2. Overlaid panels (finest paint base for check-free finishes); 3. Texture One-Eleven® “grooved” panels.

WSP

Exterior plywood of other western softwoods also available; look for this DFPA trademark.

MALT-A-VENTS

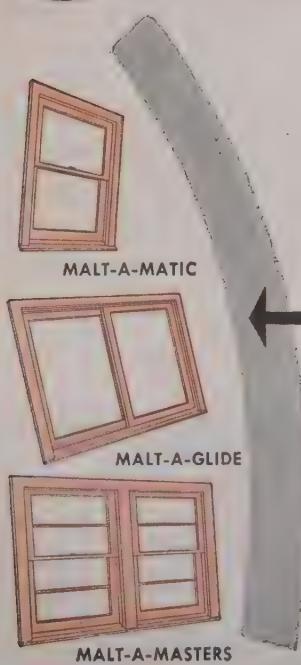
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best
friends

The wise builder sees the big advantages of MALTA windows right in his bankbook. He knows he cuts construction time and selling time when he adds the eye-catching glamor of MALTA windows to every home he builds. He's providing future services, too. For every MALTA window is precision milled and quality constructed to provide a housetime of trouble-free service.

Look at the choice with MALTA — MALT-A-GLIDES . . . a horizontally sliding window with removable sash. MALT-A-VENTS . . . new vents engineered for use as awning, hopper, casement windows . . . for stacking and obtaining other interesting window effects. MALT-A-MATIC and MALT-A-MASTER . . . popular, practical double-hung windows for any type construction. Remember, your customers' bankbooks will benefit, too. Home buyers get top value at a truly economical price.

Write for literature and name of your nearest dealer.



Save time with MALTA JAMB LINERS. Easy to remove jamb liners insure quick installation in walls of varying thicknesses from $5\frac{1}{4}$ " to $4\frac{1}{2}$ ".



Removable sash . . . selling point for customers. Every home buyer will love the ease and convenience of MALTA "take-out" windows . . . you clean or paint the outside, inside.



continued from p. 115

This is the first time TV has covered a building industry conference. Two NBC programs, *Today* and *Home*, will tune in on the AIA session. **Ted Rogers**, producer of *Home*, said he will try to cover AIA round table sessions and show the actual homes which are winners in the "Homes for Better Living" awards sponsored by AIA in collaboration with **HOUSE & HOME** and **Sunset Magazine**.

The awards, first of what is planned as an annual regional competition, are to recognize good design and quality construction in both architect-builder and architect-client houses.

Hartford VA raises valuation 33% on house it once derided

VA's Hartford, Conn. office did an amazing back flip on a two-year-old CRV decision against modern design.

Builder **William Nathan** learned that one of his Norwalk houses (which VA valued at \$18,500 against his \$20,500 selling price in 1954) was recently resold with a VA mortgage. New CRV: \$25,200—a boost of some 33%! Nathan says the house has not been



CONNECTICUT CONTEMPORARY
VA ONCE SCORNED

improved since he built it, except for a coat of paint. The neighborhood has not changed much, either.

Two years ago, Hartford VA officials thought that Nathan's good looking, contemporary homes were too modern for New England. Grumbled VA: "We should have Cape Cods, colonials and split levels. People who want houses like that should go to California." (H & H, April '55)

Months of prodding and even an appeal to Washington produced only more bureaucratic indifference to modern design.

Cracked Nathan on VA's new appraisal: "My how prices have changed in two years."

Was Bill Levitt the biggest 1955 home builder?

A new figure for Big Builder **William J. Levitt**'s 1955 volume was thrown into the hopper this month. **City Title Insurance Co.** announced that it closed 3,945 titles last year on Levittown, Pa., houses.

If that figure accurately reflects how many houses Bill Levitt started in 1955, he was still the country's biggest builder.

Preoccupied with plans for a new Levittown in New Jersey, Levitt was the only big operator who declined to give **HOUSE & HOME** the figures needed for its annual report on the biggest operators (H&H, Feb.). Best figures **HOUSE & HOME** could get from building authorities in the area indicated a 1955 production of around 3,000. This is 25% less than the figure announced by City Title.



SPECIFY EXTERIOR PLYWOOD and BATTEN SIDING to add a crisp, well-tailored look to contemporary or ranch-style homes. Big panels give you unusual design flexibility. Battens can be spaced to line up exactly with windows or other openings. Exterior plywood siding cuts application time up to one-third. Won't split or puncture. Panels $\frac{3}{8}$ " thick meet FHA requirements for application as combined siding-sheathing.

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Exterior plywood of other western softwoods also available; look for this DFPA trademark.

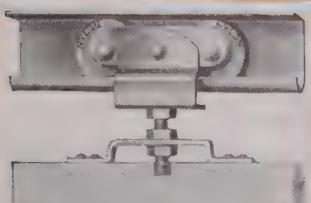
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File folder assembly contains design ideas, application, specification data. Write (USA only) Douglas Fir Plywood Association, Dept. HH, Tacoma 2, Washington.

National



Made in two styles, either with a single large Nylon wheel 1½ inches in diameter or the tandem style with its exclusive adjustable feature. Wheels glide freely and silently without the need of lubrication.



No. 185 Sliding Door Hanger
Adjustable

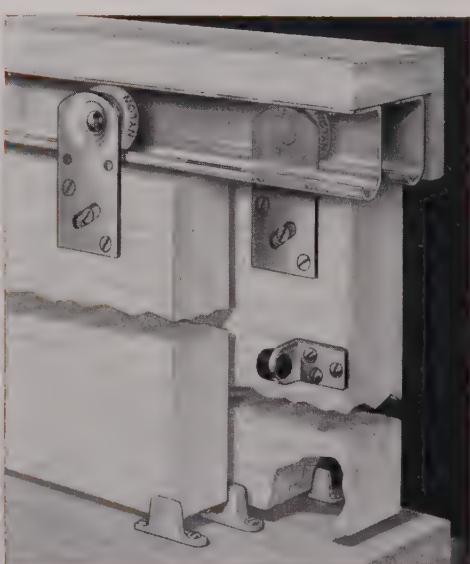
Track is made of heavy 16 gauge Steel, Hot Galvanized and is furnished in lengths of 44, 56, 60, 68 and 92 inches.

SLIDING DOOR HARDWARE

*Designed exclusively for
smart interiors!*

Saves valuable floor space with bypassing doors or doors sliding into their own recessed pockets. More artistic placement of furniture and wall decorations are possible too with this streamlined, modern method of door manipulation for connecting rooms, wardrobes and closets.

Architects, builders and home owners alike are most enthusiastic about the NATIONAL Sliding Door Hardware because both hangers and track serve every thickness of door. Special floor guides, bumpers and pulls have been designed to serve these new type sliding doors.



View showing complete assembly of No. 182

National

MANUFACTURING COMPANY

Sterling,
Illinois

EVOLUTION IN HOME BUILDING

Sirs:

We sincerely feel the revolution in home building has been mis-named (Jan. editorial). The proper word is evolution. If the basic tenets are correct, we shall certainly evolve to the true facts of the situation. A sudden opening of everybody's "eyes and minds" might be just the catalyst to wreck the whole merry-go-round.

MARVIN B. MYERS
Auburn Construction Co.
Rockford, Ill.

THE PROBLEM OF THE OLD HOUSE

Sirs:

Our greatest problem is what to do with older houses and how to keep areas where they are located from becoming blighted.

Some of these areas can be cleaned out under the Urban Redevelopment Program. But this would make only a minor dent. To really get the job done, FHA will have to make 5% down, 25-year loans at 5% interest plus 3/4 to 1% FHA Mortgage Insurance (with realistic appraisals). VA will also have to follow sales prices closer so that older houses may be purchased with a GI loan.

Your January editorial asked why we don't try to build and sell houses to the greater upper middle-class. I agree 100% that we should.

This is just what we are telling our contractor customers every day. If FHA or VA however, made some plan to handle the older houses the answers to that question would be easier and we would find more contractors using your good ideas on how to give us more and better houses for less money.

HENRY A. BUBB, president
Capital Federal Savings and Loan Assn.
Topeka, Kan.

SOMETHING TO THINK ABOUT

Sirs:

I do not know what reaction you got from other segments of the shelter industry (Jan. editorial) but it ought to give them something to think about.

I wish I were brilliant enough to figure out an answer to the problem of making it more flexible to trade in older properties on new ones. The trade-in problem poses a real challenge to those of us in the financing business. I have already requested the appointment of a special committee of the U. S. League to study the problem.

J. HOWARD EDGERTON, president
California Federal Savings
Los Angeles

NOT BACKWARD

Sirs:

... I disagree wholly that the building industry is backward (Jan. editorial). It is probably one of the most efficient industries existing. No other industry can pro-

continued on p. 121

ADD STYLE and SALEABILITY

with

Texture One-Eleven®
(EXTERIOR FIR PLYWOOD)

SPECIFY TEXTURE ONE-ELEVEN to give your homes new buy-appeal. This smart "grooved" plywood combines line and texture to create dramatic pattern of highlight and shadow. Use it for siding, as combined siding-sheathing, or to accent other materials. Goes up quickly; shiplap edges neatly conceal vertical joints. Grooves are full $\frac{1}{4}$ " deep, $\frac{3}{8}$ " wide, have sharp, clean-cut edges.

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Exterior plywood of other western softwoods also available; look for this DFPA trademark.



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HELPS SELL
A HOME LIKE
ALL-COPPER
PLUMBING...

...and
Streamline
COPPER TUBE AND
SOLDER-TYPE FITTINGS
ARE THE POPULAR CHOICE OF
BUILDERS AND ARCHITECTS
EVERYWHERE

WRITE TODAY!
FOR INFORMATION KIT NO. 15
CONTAINING THE DETAILED
STORY OF COPPER FOR DRAINAGE

172-A

MUELLER BRASS CO. PORT HURON **6,** MICHIGAN

duce not only quality but quantity under the conditions in which ours works.

RALPH WALKER

Voorhees, Walker, Smith & Smith
Architects
New York, N. Y.

FHA'S GENERAL COUNSEL

Sirs:

... Your story about me (March, News) indicates that I was a member of the Board of Directors of Sun Ray Drugs, Botany Mills and Hercules Cement Co.

As of February 1, 1956 I resigned completely from my law firm and from any connection with those companies in the real estate or building fields. As a result, I no longer am an officer or director of Hercules Cement although I have retained my directorate on the Sun Ray and Botany Mills Board.

ROBERT B. WOLF
General Counsel, FHA

A FINE OLD HOUSE

Sirs:

... An excellent presentation on the Culbertson house (March issue.)

The job was most complex. Few builders would have the understanding and patience that was necessary. Knowing the respect builders have for your magazine, we think they would like to know that the Roulac Co. was builder-coordinator on this job.

WHITNEY R. SMITH, AIA
Smith & Williams
Pasadena, Calif.

2-WAY PANEL SAW

Sirs:

You incorrectly stated that the Bennett 2-Way Panel Saw is manufactured by Black & Decker (Feb. issue). Their saw is an integral part of the machine but we do the manufacturing. Price is \$287.

EUGENE S. PATTON, sales manager
The Richard C. Bennett Mfg. Co.
Laceyville, Pa.

ACOUSTICALLY TRANSPARENT

Sirs:

We must protest against what seems to be a trend toward "acoustically transparent" walls and partitions for houses. While the economic advantages of lightweight partitions are attractive, the poor sound isolating properties of lightweight walls are well-known.

Although it is possible that homeowners may come to accept a lower standard of privacy in their houses, it is ironical that "progress" in the housing field is leading back to a "paper wall" culture.

We believe that if builders and architects will add privacy to other design goals now, while the designs of new components are being worked out, the freedom to speak—in private—will not be lost.

B. G. WATTERS
Bolt Beranek & Newman, Inc.
Consultants in acoustics
Cambridge, Mass.



with EXTERIOR
FIR PLYWOOD

SPECIFY FIR PLYWOOD for soffits, gable ends, patio fencing and exterior trim. Choose standard panels for smooth, flat, unbroken effect . . . Texture One-Eleven® ("grooved") plywood for striking pattern and texture. Either kind simplifies cutting and fitting . . . creates handsome contrast with masonry or other materials. Fir plywood accents offer ideal solution for quick and easy exterior "face lifting" on remodeling jobs, too.



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*F.H.A. limitation sheet 57 authorizes regional offices to accept Bird Ranch Roof for slopes as low as 2" in 12" with one layer of #15 asphalt felt laid dry.

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Cover: Students work on community plan at Pratt Institute. Photo by Hans Namuth.





FOR THE DARING YOUNG MAN IN HOME BUILDING

the future has never looked brighter.

by Peter Blake

This is true not only because of the current level of prosperity. Less obviously, but more importantly, it is true because of two major postwar advances on the American scene: first, the growth—at long last—of a building technology capable of handling the tasks assigned to it years ago by advanced architects and builders; and, second, the emergence of an enlightened and sympathetic public.

To understand how radical a change this represents, look back to the days before Pearl Harbor:

- *Then* to build a modern house—a house designed to reflect, among other things, the technology of our time—required expensive special equipment, details and materials, all tacked together by men who had no training for the job.
- *Today* it is entirely possible to assemble a complete modern house from standard, inexpensive, well-designed, precision-made components. In fact, where modern architects of the Twenties and

Thirties struggled to make their hand-made houses conform to a machine-esthetic, some of the builders and prefabbrics of the Fifties are trying, instead, to make their machine-produced houses look rough-hewn and handicrafted.

- *Then* to live in a modern house was considered almost eccentric.
- *Today* many builders of traditional houses are finding it hard to sell their houses in the face of popular demand for a new kind of architecture—a demand built up, over the years, through intense publicity in all media.

That is why the future looks bright for young architects and young builders alike. They have an unbeatable combination to work with: an enlightened public, an advanced technology, and a healthy economy to encourage both.

And they have another unbeatable combination: each other. For this bright future is going to require a monumental *collaborative* effort—an effort on the part of architects, builders, planners, manufacturers and any number of other specialists. Are these specialists being trained to make that effort?

The answer is that some of them are, but many of them are not. For there is no great sense of urgency in the air today: the young men of 20 years ago were faced with a daily struggle which produced a ferment of new ideas, an almost revolutionary zeal that seems largely absent today. And because this sense of urgency is today largely absent, there is some danger that the new generation will not face up to the seriousness of our coming needs.



"Today it is entirely possible to assemble a complete modern house from standard . . . components."

Charles Eames house
Santa Monica,
Calif. 1949.



"Some . . . prefabbrics of the Fifties are trying, instead, to make their machine produced houses look rough-hewn and handicrafted."

Prefabricated log cabin,
1956.

Today's young would-be architect has the choice of dozens of excellent schools—schools in which faculty and students are in tranquil agreement on all basic issues. Upon graduation, he has the choice (particularly if he has tux, and will travel) of dozens of well paid jobs doing the sort of architecture he was trained to do in the classroom. And upon receiving his license, he has the further choice of several types of profitable practice—and the practice, he thinks, will be the more profitable the farther removed it is from the de-

sign of individual houses.

In short, the young architects have never had it so good—which is another way of saying that the incentive to make things better is not particularly strong. As Prof. Henry-Russell Hitchcock said a couple of years ago, “One cannot help noting the slower pace of architectural development compared to that of 25 or 30 years ago . . . neither in theory nor in practice have there been proposed such revolutions as made the Twenties so exciting.”

If the temper of the times is not revolutionary, neither does it favor stagnation (stagnation being the Number One Enemy of prosperity in a free society).

The revolution in architecture—from 1900 to 1940—was so violent that it went far beyond the bounds of the “immediately possible.” It has often been said that the millennium will come when we are able, ideologically, to keep up with what is being produced by the technicians. But the one place in which ideology has been consistently ahead of the technicians is in architecture; here ideology overtook technology by so many leagues that, in the end, the architects have had to turn back a little and lend the producers a helping hand.

Frank Lloyd Wright talked about “continuity” 50 years before the plastics industry and the reinforced concrete engineers finally caught up with him and made “continuity” a major reality.

Walter Gropius built his glass curtain wall in 1911 and then had to wait for 40 years until the manufacturers agreed with him.

Henry Wright, Clarence Stein and others defined and built the garden community 30 years ago—but not until recently has the idea

begun to interest many builders.

The fact that these and other ideas have now begun to interest builders—*young* builders in particular—is reason for optimism. So, too, is the fact that universities are beginning to offer undergraduate training in home building. Even more important, many young home builders are coming from the engineering schools and some even graduate in architecture. This is raising the general level, if not yet producing advanced thinking.

This is indeed a time of consolidation. A time in which the modern house may, at long last, be built with modern materials and modern techniques; a time in which the “Machine Art” of the Twenties may, at long last, be produced by machines; a time in which the “Panelized Facade” may, at long last, express a true system of prefabrication, in which the metal house, the plastics house, the foam house, the space-frame house (and even just the plain, ordinary, run-of-the-mill house) may, at long last, be built to work and to serve the needs of families rather than to serve as a manifesto.

And this is also a time of re-examination. For as technology finally catches up with theory, certain assumptions made in the past (when there were few ways of checking them against available data) begin to look questionable.

“Walter Gropius built his glass curtain wall in 1911 and then had to wait for 40 years until the manufacturers agreed with him.”



For instance: The "skin-and-bones" architecture so characteristic of early modern work is being re-examined as we make more use of the strength inherent in the skin alone. *Item: Eduardo Catalano, by building his own all-skin house near Raleigh, N. C. (see H&H, August, 1955), has given impetus to an entirely new approach to structural design—an approach now dominant not only at N. C. State College (where Catalano teaches), but at many other architectural schools as well. Characteristically, the most popular visiting lecturers at U. S. architectural schools today are such visionary engineers as Buckminster Fuller (to whose work the North Carolina Student Publication regularly devotes a major portion of its space), Konrad Wachsmann, Pier Luigi Nervi, Robert Le Ricolais, Paul Weidlinger and others. The popularity of these men seems to suggest a very real interest in structures that go beyond the rectangular cage.*

© Ezra Stoller



"Eduardo Catalano, by building his own all-skin house near Raleigh, N. C., has given impetus to an entirely new approach to structural design."



"The most popular visiting lecturers at U.S. architectural schools today are such visionary engineers as Buckminster Fuller." Photo from *Perspecta*.

• The notion that all structure must be "expressed" is being revised in many places. *Item: Architect Marcel Breuer states in his new autobiography: "There is such a thing as excessive structural expression—structural exhibitionism . . . it makes no sense suddenly to decide that the structure and everything else (mechanical equipment, etc.—Ed.) . . . must be visible for some reasons of doctrine or dogma."*

• The happy thought that today's young architects are free from the dictates of stylistic fetishes turns out to be something of a pious hope instead of reality. *Item: Writing in a recent issue of Triangle, the University of Pennsylvania's student magazine, Lewis Mumford suggests that "eclecticism and historicism, the two stylistic sins of the old architectural schools, did not disappear: rather they came back in modern disguise. Students who would not imitate Palladio or Adam imitate Le Corbusier or Gropius (he might well have added Wright—Ed.) . . . Instead of drawing on the history of 20 centuries the student now draws on the history of 20 years . . . the organic development of modern forms, through a deeper insight into the entire architectural complex, is now threatened with arrest."*

• "Traditional" functionalism, once the most Sacred of Cows, is being slaughtered right and left. *Item: Writing about "The Functional Neurosis" in a recent issue of the British Architectural Review, a young Australian architect, Robin Boyd, says: "Design-for-function . . . is the mold in which architecture is cast, not an ingredient . . . Functionalism is being renounced because the first attempts to apply the functional ethic always tend in the same direction, and we are tiring of this direction." And he calls for a new interpretation of functionalism: "There is no need to cut the functional anchor while we explore architecture further . . . functionalism . . . can and must provide the discipline under which the architect's idea is worked out to its conclusion in terms of building materials . . . but what matters is the strength of the idea, and how it is developed . . . What matters in terms of art is whether the idea is developed consistently enough to permeate the entire work."*

And yet there is very little disagreement on the basic concepts of today's architecture. As the student-editors of the MIT architecture school publication put it recently: "The question as to whether architecture should be 'traditionalist' or 'modern' . . . was answered long ago . . . satisfying architecture can best be provided by using our modern resources in materials, systems of structure, new forms and our own convictions about art and life." And the student-editors of the University of Pennsylvania's *Triangle* have announced categorically that

"the battle is over. We have won." (This, by the latest count, is the 739th time that "the battle" has been won.) So there is no turning back.

Yet what of the creative future? Consolidation and re-examination are both important, both long overdue. But few young men are willing to limit themselves to the review of things past, and there is evidence that a new upsurge of creativeness is at hand.

Creativeness of what sort? Some of the clues may be found in the student publications currently produced by the leading US architectural schools.

The most striking fact about these *student* publications is that their contributors, *almost without exception*, are professors rather than students, established practitioners rather than beginners. The excellent Yale review, *Perspecta*, publishes Prof. Henry - Russell

Hitchcock, Prof. Christopher Tunnard, Architects Louis I. Kahn and Philip C. Johnson. The N.C. State Review publishes articles by Buckminster Fuller, Mies van der Rohe and J. Robert Oppenheimer. The University of Cincinnati's *One Quarter Scale*, in its latest issue, publishes an article by Architect John MacL. Johansen, discusses the work of Felix Candela and the Aspen Conference. All very stimulating, all very worthy.

But when the young men have something to say for themselves, their talk goes far beyond the narrow field of the single building: they talk about a new dimension in architecture, a dimension most dramatically defined by Yale's planning school when it attacked the problem of "a 34 million population city, 600 miles long, stretching from Norfolk, Va., to Portland, Me." Here was some inkling of the new architectural scale—the kind of scale that seems to intrigue young architects throughout the US.

For, judging by the student publications, some of the young men are ahead of many of their elders in one important respect: they have grasped the fact that the smallest design unit of tomorrow will be the super-block rather than the brick, that the smallest planning unit of tomorrow may be the region rather than the house and its lot.

In every single student magazine being published today, the outstanding *student* contribution tends to be an article dealing with this new architectural dimension. The only student contribution to N. C. State's Spring, '55 Review, for example, was a study of an 80 square mile area northwest of Raleigh; the recurring theme in *Space*, the lively publication of the University of California's School of Landscape Architecture, concerns itself almost exclusively with the bigger dimension in architecture; and Yale's *Perspecta* has consistently devoted a portion of each issue to architecture seen not by the single building, but by the whole city or region.

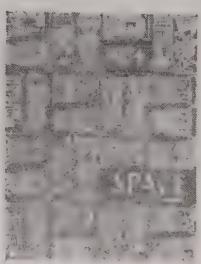
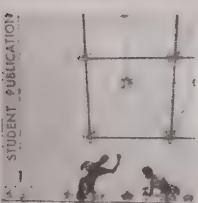
This, then, is where the students stand today: In their immediate work they are still greatly dependent upon the inspiration of the first 50 years of the modern movement. But in their advanced thinking they are coming to grips with the biggest problem architects, planners and builders have ever had to face: how to re-design entire regions, how to give form to spaces beyond the range of the naked eye.



"The most striking fact about these student publications is that their contributors, almost without exception, are professors rather than students, established practitioners rather than beginners."



BALANCE



If the future of US home building seems brighter it is because both young builders and young architects are helping to make it so.

Schools offering architectural engineering courses that include home building construction:

Alabama Polytechnic
Catholic University
Clemson
University of Colorado
University of Florida
Iowa State
Kansas State
University of Kansas
Montana State
University of Nebraska
North Dakota Agricultural
Oklahoma A & M
University of Oklahoma
Pennsylvania State
University of Pennsylvania
Rensselaer Polytechnic
Tulane
Virginia Polytechnic
Washington University

Schools also offering home building courses (light construction and construction management):

University of California, L.A.*
University of Denver
Georgia Tech
University of Illinois
MIT
Michigan State**
Temple
Texas A & M
Trinity University (San Antonio)
Washington University
University of Wisconsin**

* Offers degree in Construction Management

** Offers degree in Light Construction

At architectural schools throughout the country, students are learning to work with builders on practical solutions for specific suburban developments. Last year, Prof. Bruno Funaro at Columbia got his students to work with Rockland County builder Eugene Ellish on a realistic community project; at Pratt Institute, Dean Olindo Grossi proposed that his students design a new suburban community for Long Island (see cover); Dean Arthur Gallion at UCLA, Prof. James Lendrum at Illinois, Professors Larsen and Sanders at Michigan—to mention only a few—have encouraged their students to concentrate on home building problems, and have encouraged builders to come in and participate. And so have the heads of town planning schools and schools of landscape architecture. Without much fanfare, col-

laboration between architects and builders is becoming a reality at schools throughout the US.

And the young builders now have their own schools, too (see box). Today's young builder is often a man academically trained in light construction (and eager to make some drastic changes in that field); a man increasingly conscious of good design (he chooses, in many cases, to live in a modern house himself); a man deeply concerned with problems of community planning. And he has learned to recognize something of the greatest importance—something which many of his elders failed to see in the past: *that the output of his industry produces a permanent change on the face of the earth, and that such changes cannot be made lightly, or for immediate commercial advantage alone.*



"At architectural schools throughout the country, students are learning to work with builders on practical solutions for specific suburban developments."

By 1965 this country will need 2 million new houses a year to take care of new family formation and to replace obsolete structures. The challenge to all young men in US home building is tremendous—and sobering.

As of today, our production of certain materials is not equal to the challenge—so new ways must be found, immediately, to construct houses more efficiently, to use materials to greater advantage.

As of today, our accumulation of savings is not equal to the challenge—so economists had better go to work figuring out how the US can afford to build what the US will need.

As of today, our supply of developed land in the right places is not equal to the challenge—so builders and land planners had better start getting together, fast.

But most importantly of all, our supply of design, planning and building talent is not equal to the task. And the young men in home building had better do something about that in a hurry.

So all the arguments about whether builders and architects could or should collaborate are beside the point. Obviously, they must learn to collaborate—not tomorrow, but here and now. The need is too great and the problems are too great.

And so is the opportunity.

Today's young architects are busy re-examining the principles first laid down by the pioneers between 1900 and 1940.

These principles need to be re-examined in the light of two new developments: First, because our building technology has advanced sufficiently so that many of the ideas first put on paper dozens of years ago may now, at long last, be realized. And, secondly, because the way we live today is sufficiently different from the way people lived 30 years ago (when many modern plan assumptions were first made) to call for a fresh look at the house plan.

Much of this re-examination is being done by young architects because so many new custom houses are being designed by men who are just starting out on their own.

On the next 13 pages are shown examples of some of this re-examination in two major fields—structural systems and family plans. If these examples lack radical novelty, they make up for this lack by their uniformly high standard—a standard much higher than any achieved in US home building in many generations.

Five young architects re-examine

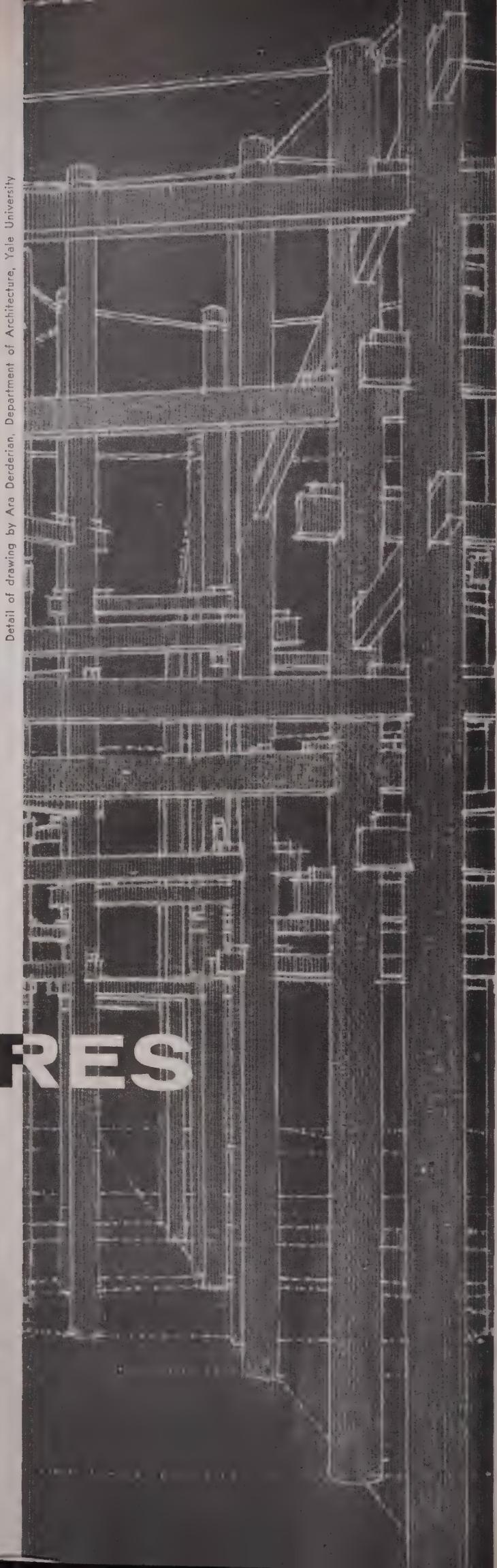
STRUCTURES

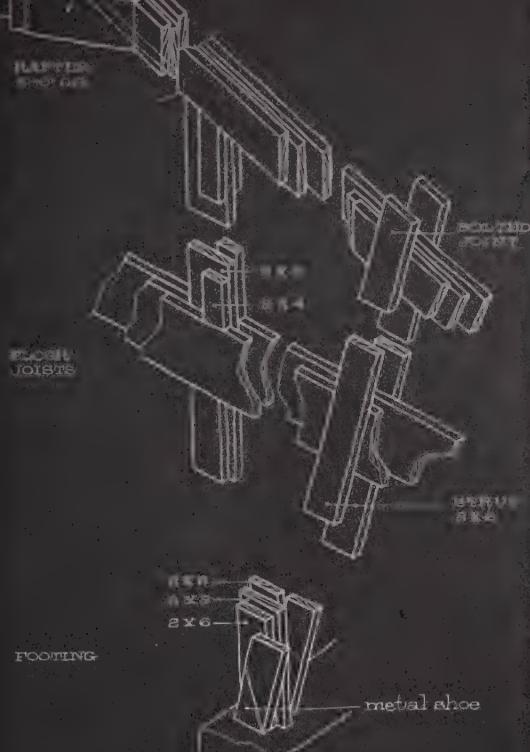
Most modern structural systems try for two things: they try to replace the load-bearing wall with a structural "cage" supported on only a few points; and, in doing this, they try to leave the interior spaces as open and uninterrupted by structural supports as possible.

One reason for point-supported structures is to facilitate the insertion of sheets of glass or of opaque wall panels between structural frames. And the reason for opening up the interior is to get open, flexible plans.

The experiments on the next five pages suggest a further attempt to make the structural cage an effective, rhythmical and decorative design element. This is particularly evident in the hillside house by Mark Mills, shown opposite.

Detail of drawing by Ara Derderian, Department of Architecture, Yale University



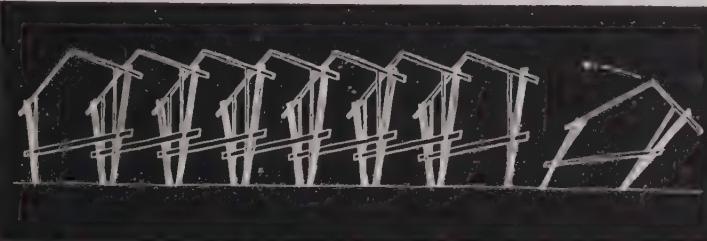


Details show frame braced and triangulated with double posts, built-up girders.



Hillside lot faces the Pacific at Carmel. Lower floor contains carport and utilities. Mills hung flower boxes between his structural frames and brought landscape up to the window sill.

Designer Mark Mills re-examines the **TRUSS FRAME**



Bob Willoughby

Truss frames were bolted together on the ground. First frame served as jig for other seven. Frames were then tilted up into place. Stilt-construction cuts foundation costs.

DESIGNER: Mark Mills
GENERAL CONTRACTOR: A. De Vries
LOCATION: Carmel, Calif.

The structure of this beautiful hillside house consists of eight identical, two-story-high truss frames that were assembled flat on the ground, then tilted up into place. The frames are set 8' on centers, exposed both inside and out to form a highly decorative structural pattern.

Mark Mills was born in a mining town in Arizona, received a degree in architectural engineering at Colorado University, then spent four years studying with Frank Lloyd Wright. He now practices in Carmel, Calif.

Two-bedroom plan was developed for a Carmel builder who put house up on speculation. Three more houses will be built on the property in the future. At right, living area with built-in seating units, stone fireplace.



Morley Baer



Formwork for 2-way cantilever structure is seen in this aerial view of the site

Architect Reginald Knight re-examines the **REINFORCED CONCRETE FRAME**

ARCHITECT: Reginald C. Knight
STRUCTURAL ENGINEER: Thomas H. McKaig
GENERAL CONTRACTOR: Elmo A. Knight
OWNER: Ben Stahl
LOCATION: Sarasota, Fla.

Stilted roof deck sits on short steel pins embedded in concrete girders. Ribbons of glass, mitered at the corners, fill in space between girders and roof.

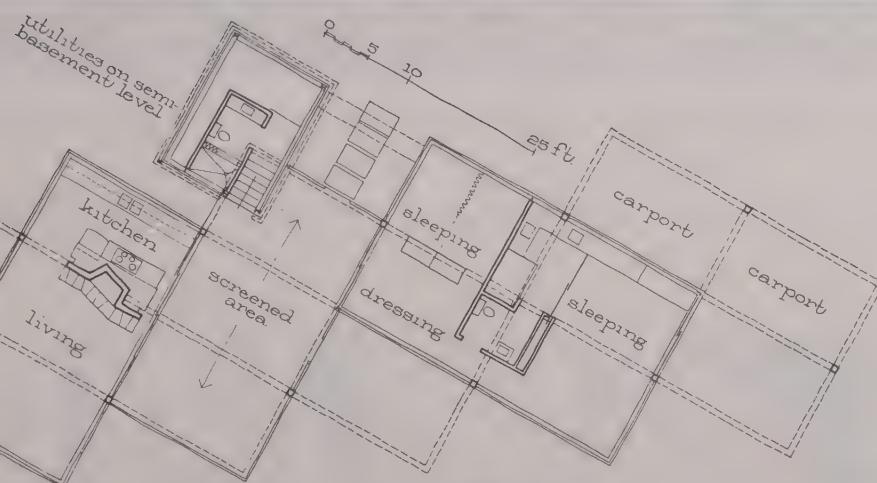


Photos: (opp. and left) Joseph Janney Steinmetz

Because this Sarasota house is in the line of tropical winds and a mere 3' above the Gulf of Mexico's average high tide mark, Architect Knight chose a fully continuous structure for his basic frame. This structure is supported on 12 columns tied together with grade-beams so that, in theory, the whole house could withstand being overturned by a hurricane.

The concrete frame was designed according to the Greek "Golden Section:" the clearance under the girders is about 7' (i.e. the height of an average man with arm raised.) The width and length of each bay is then determined by the ancient formula $\left(\frac{a}{b} = \frac{b}{a+b} \right)$

To increase the ceiling height in some of his plan areas, Knight de-



signed a laminated deck stilted on 1" square and 12" high steel pins that stand, in turn, on the concrete girders. The space between this deck and the top of the girders was closed in with ribbons of glass.

The plan consists of two "islands"—one for daytime use, the other for the bedrooms. A 500 sq. ft. screened porch connects the two and forms an outdoor entrance hall. The structural system has proved flexible enough for the owner to make several basic plan changes without affecting the general appearance of the house.

Reginald Knight was born in Grandfalls, Newfoundland, and trained at Columbia and Harvard. As a designer for Skidmore, Owings & Merrill he worked on Lever House, is now in private practice in Sarasota and New York.

Glamorous setting makes this a perfect house in which to entertain guests. Owner, a well-known commercial artist, wanted just that.

Plan pattern shows structural bay system based on proportions of "Golden Section." Utility area, which is part underground, contains year-round air conditioning system, which uses underground ducts.

Approach side of house (below) shows roof of utility area at right, topped off with planting box.





Under construction, building revealed all the grace of its modular frame. Clerestories along length of house

Architects Twedell & Wheeler, and Designer John Garber, re-examine the **CLERESTORY TRUSS**

ARCHITECTS: Twedell & Wheeler

DESIGNER: John Garber

GENERAL CONTRACTOR: David Kugler

LOCATION: Cincinnati, Ohio



View down into living room from high guest-bedroom balcony reveals a decorative abstract pattern of overlapping trusses. Designer Garber feels that skinny, taut construction is characteristically American, tried to stress this aspect. Big screened porch (750 sq. ft.), framed just like enclosed part of house, forms an extension of the living area.

Edward P.



help ventilate interior

North elevation expresses dramatic truss frame with clerestory strip above. End wall panels are filled with glass or vertical redwood siding.

Plan is a simple 24' deep, 90' long rectangle. One third of length is taken up by screened porch. Center portion is flexible family space.

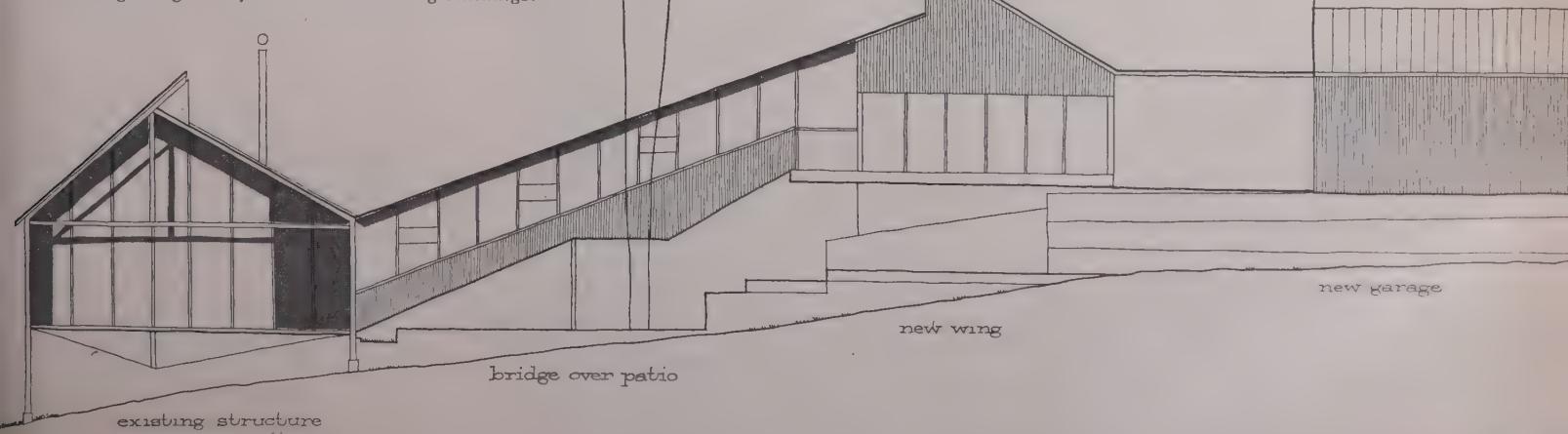
This dramatic studio house is composed almost entirely of wood trusses and trussed girders that have been traditional in US farm structures for generations. The effect, however, is anything but traditional (see above).

The structure consists of ten identical frames set 10' apart and left almost entirely exposed to form a decorative skeleton that appears and reappears inside and out. All connections were made with Teco

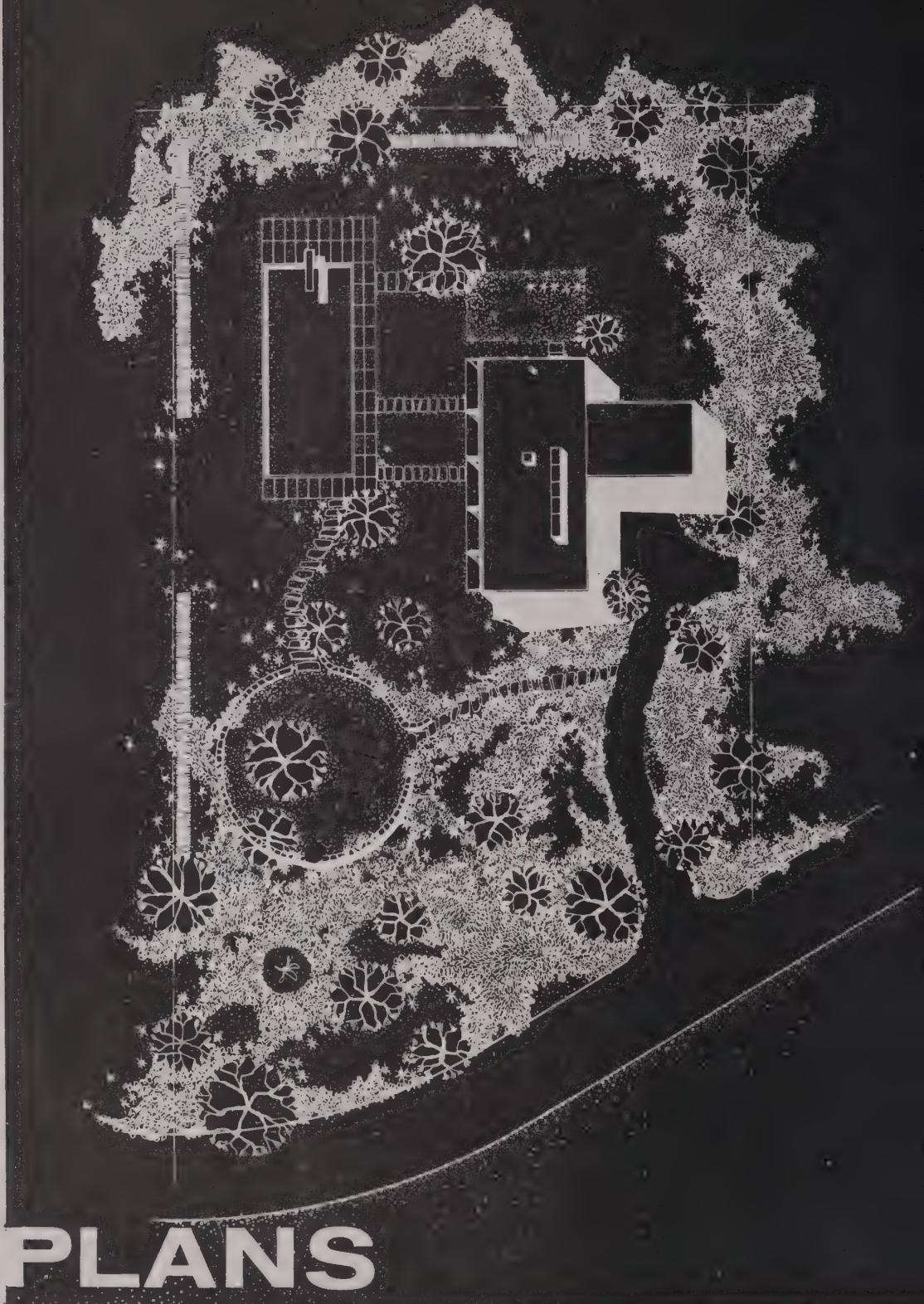
ring connectors, steel gusset plates, or both. The trussed girders which carry the floor are assemblies of 2 x 14's, tension rods and struts. They span 24'. Within this framework, an impressive volume of space was enclosed at relatively low cost (\$1 per cu. ft.).

Architects Richard Twedell and Richard Wheeler, and Designer John Garber met at Harvard before they opened an office in Cincinnati, where they now practice.

Present structure is first stage of larger development. 50' long bridge will join new and existing buildings.



Site plan of William Holland residence by Architects Eshbach, Pulinger, Stevens & Bruder, Philadelphia, Pa.



Six young architects re-examine house

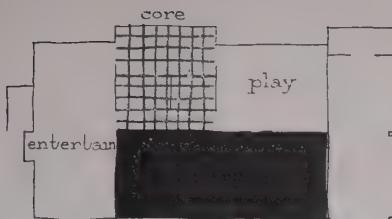
PLANS

The biggest change in US family living over the past 30 or 40 years is that it has become fuller and, thus, more complex.

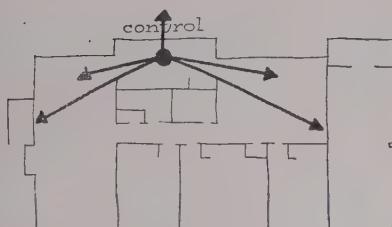
Our families are bigger; they do more entertaining with less help; and they have more hobbies and more elaborate facilities with which to pursue them.

All of this tends to make some of the "old" modern plans at least partly obsolete. The all-open plan, for instance, won't work in a servantless house. The compact bedroom and study cubicles once so popular now are being supplemented with spacious family rooms. And the service wing of old must be replaced with a centrally located kitchen from which the mothers of today can control all entrances and all outdoor and indoor play areas—unaided.

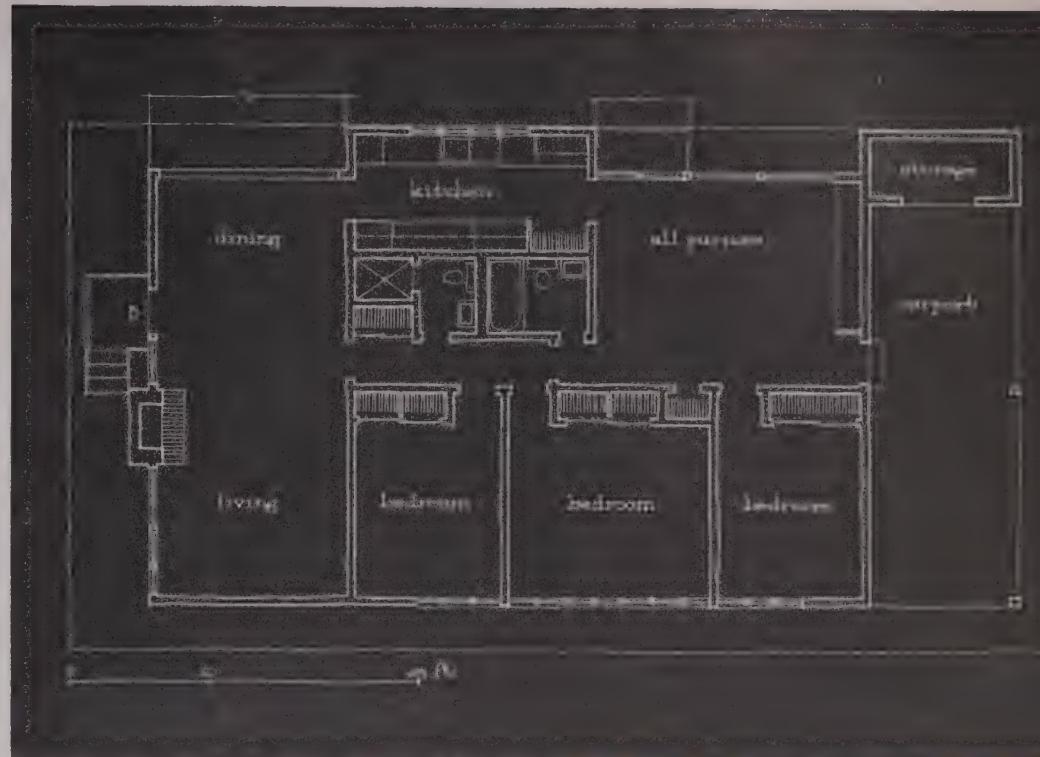
On the next seven pages you will see some fresh modern plans that are based upon a re-examination of these and other new factors.



Plan divides simply into areas for entertaining, sleeping and play—all grouped around service core.



- Kitchen** controls both entrances, dining area, family room and outdoor play areas.



Architects Harmon & Caldwell re-examine the **FAMILY PLAN**

ARCHITECTS: Harmon & Caldwell

BUILDERS: Byrd Realty Co.

LOCATION: Birmingham, Ala.



This plan permits the housewife to supervise all major areas inside and outside the house—and prepare the dinner at the same time. From the centrally located kitchen she can see both entrances, the formal living room as well as the family room, dining areas and indoor and outdoor play spaces. And the careful placement of utilities and storage units sets up sound-barriers between zones—an asset in a 1,400 sq. ft. house.

Carroll Harmon, a graduate of N.C. State, and Herbert Caldwell, a graduate of the University of Oklahoma, now practice architecture in Birmingham, Ala.

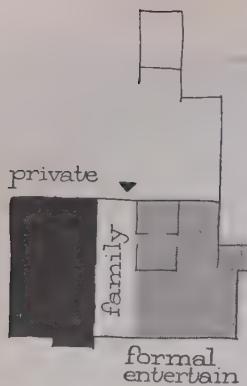
Photos: Joe Winters



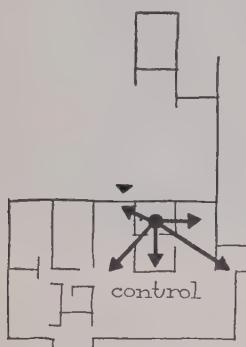
Living-dining room looks out on rocky hillside through glass walls.



Cantilevered main floor rests on concrete block base which contains utilities and storage. By recessing foundation walls architects were able to reduce size of floor joists because of the structural economies inherent in continuous cantilever spans.



Plan divides naturally into a nighttime zone, a buffer-zone containing family room and family entrance, and a zone for formal entertaining.



Both major entrances are easily accessible from the kitchen.



Outdoor living with indoor privacy is assured by proper placement of carport, extension of house wall.



Commercial Photo Assoc.

Architect Gene Leedy re-examines the **3-ZONE PLAN**

The resemblance of this house to others of similar plan is deceptive. In this house the family area acts as a buffer-zone between bedrooms and formal living room. In addition, it serves as a spacious hall for the family entrance—a place where children can dump toys and overshoes as they come indoors.

That puts the family entrance right into the center of the house.

where it should be—and the guest entrance can then be placed at the far end of the formal living area, well away from areas of privacy. The kitchen has easy access to both of these areas.

Architect Gene Leedy, who designed this house, graduated from the University of Florida, worked briefly for Paul Rudolph, is now practicing in Winter Haven, Fla.

ARCHITECT: Gene Leedy
GENERAL CONTRACTORS:
Frank Sparrow & Ike Pidgen
OWNERS: Mr. & Mrs. Frank Sparrow
LOCATION: Sarasota, Fla.

Photos: Wm. Amick



Structure is a cage of light steel columns with brick or glass panels used to fill in the bays



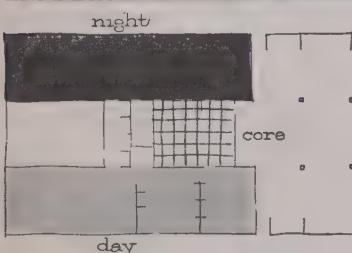
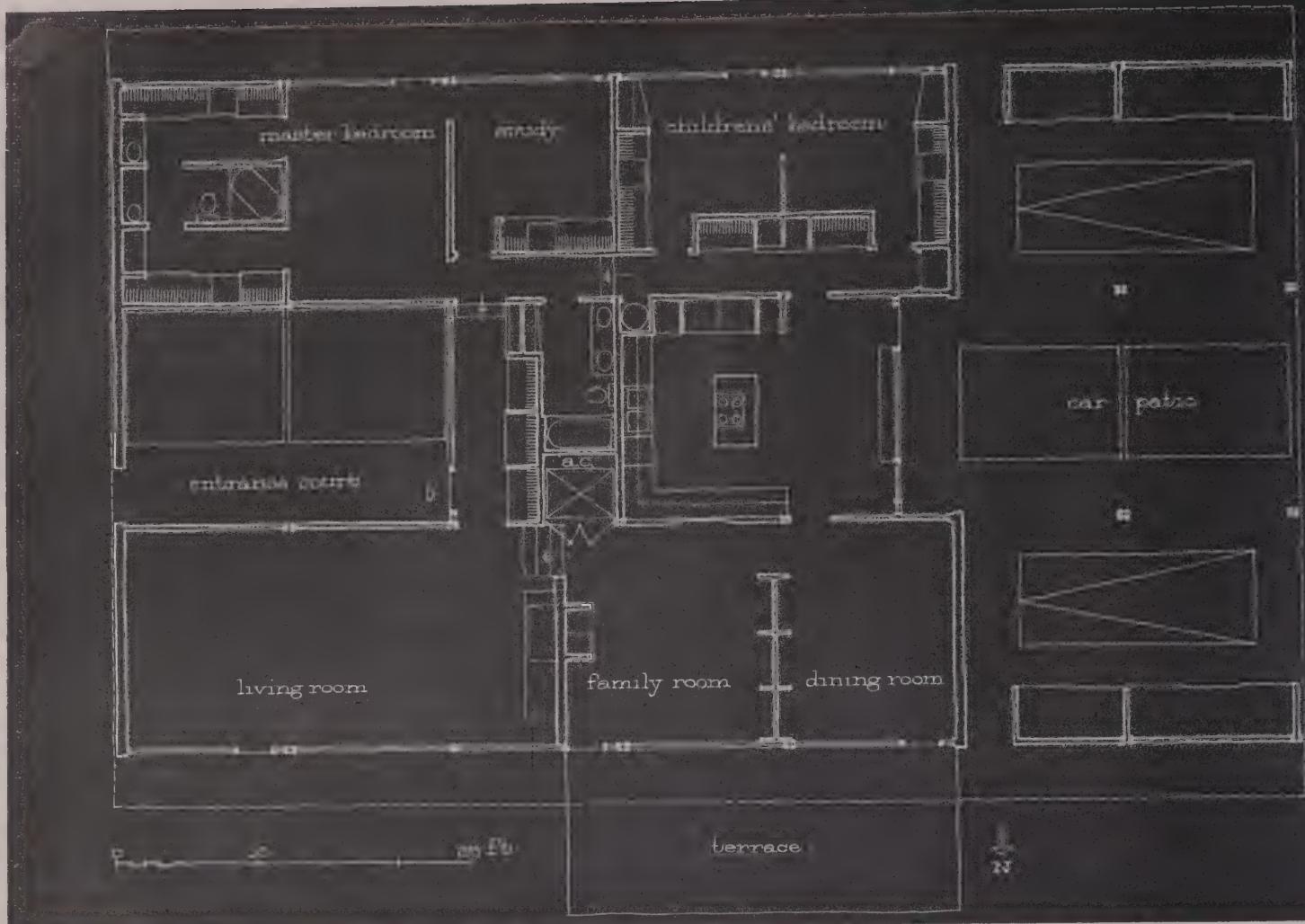
Guest entrance at living room end is screened by brick partition.



Family room (right) is buffer between sleeping areas at right, formal living areas at left. A storage wall with built-in, 2-way TV set on a small turntable separates family room from living room.

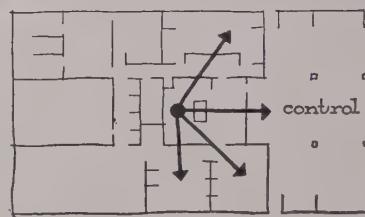
Garden facade is almost all glass, with brick enclosure to the left containing the 2-bathroom area





Plan divides naturally into daytime and nighttime areas, separated by utility core and patios (see sketch left).

Kitchen controls children's rooms, family entrance, dining room and family room, in clockwise order (see sketch at right).



Architects Short & Murrell re-examine the **H-PLAN**



OWNER: Carl Jones

ARCHITECTS: Short & Murrell

GENERAL CONTRACTOR:

E. A. Tharpe & Co.

LOCATION: Shreveport, La.



The standard H-plan offers several advantages and poses some problems. This handsome Louisiana house shows those advantages to the full—and is equally notable for its solutions to the problems.

To be specific: this H-plan house is neatly divided into daytime and nighttime areas; it gives privacy to each; it has an efficient utility core—doubly efficient because it puts the air conditioner right into the center of the house—and it has two patios, one of them a formal entrance court.

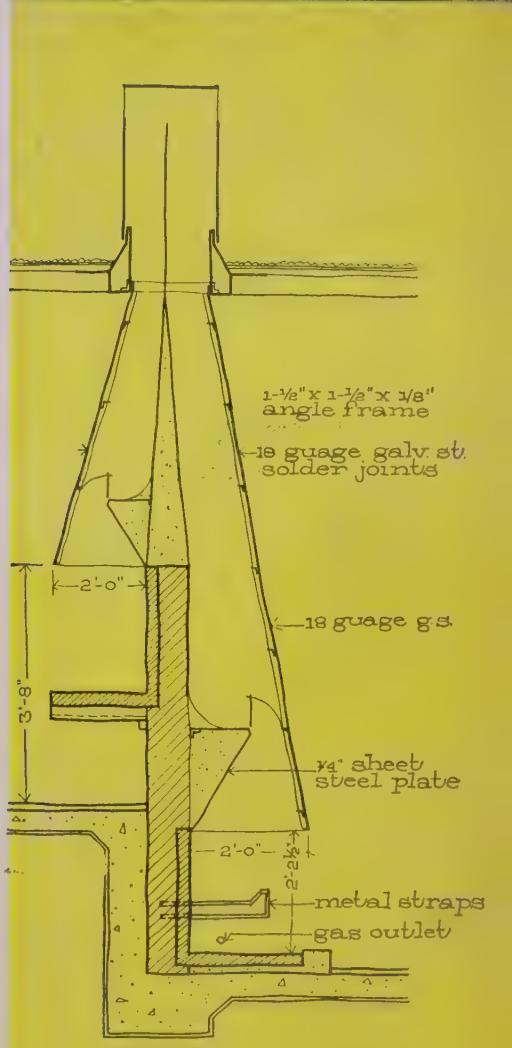
The chief problems of the stand-

ard H-plan have to do with entrances and control: it is hard, in an H-plan, to place the garage close to the kitchen and it is hard to control the main entrances from the kitchen. In this house on a corner lot, the architects solved both problems by turning the rear court into a car and service entrance directly adjacent to the kitchen. The formal entrance is thus used mainly by guests.

Both Sam Short and George Murrell were born in Louisiana, studied architecture at Tulane. Their practice is in Baton Rouge.



Entrance patio is small formal garden, used mostly by guests



Two-way fireplace faces family room and living room. On family room side (top), unit contains a rotisserie and a firebox; on the living room side is a regular, log-burning fireplace with built-in andirons. Hood is made of 18 ga. galvanized steel.

Car patio is the family entrance, leads straight into kitchen area

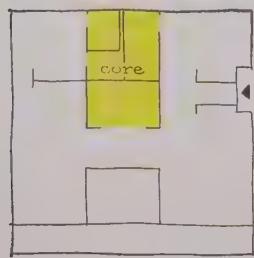




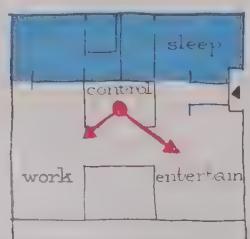
Post-and-beam structure (left and right) carries a plank roof deck made up of 2" x 3"s and 2" x 4"s set on edge and spiced together. Architect Hoops drew up dozens of details at full size scale. He says that his contractor found these much more helpful than the usual reduced scale drawings. Hoops' details were drawn on small 12" x 18" sheets that could be handled with ease on the job.

Photos: Morley Baer

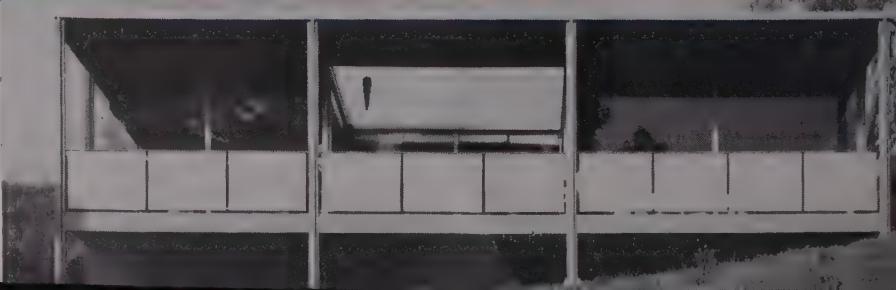
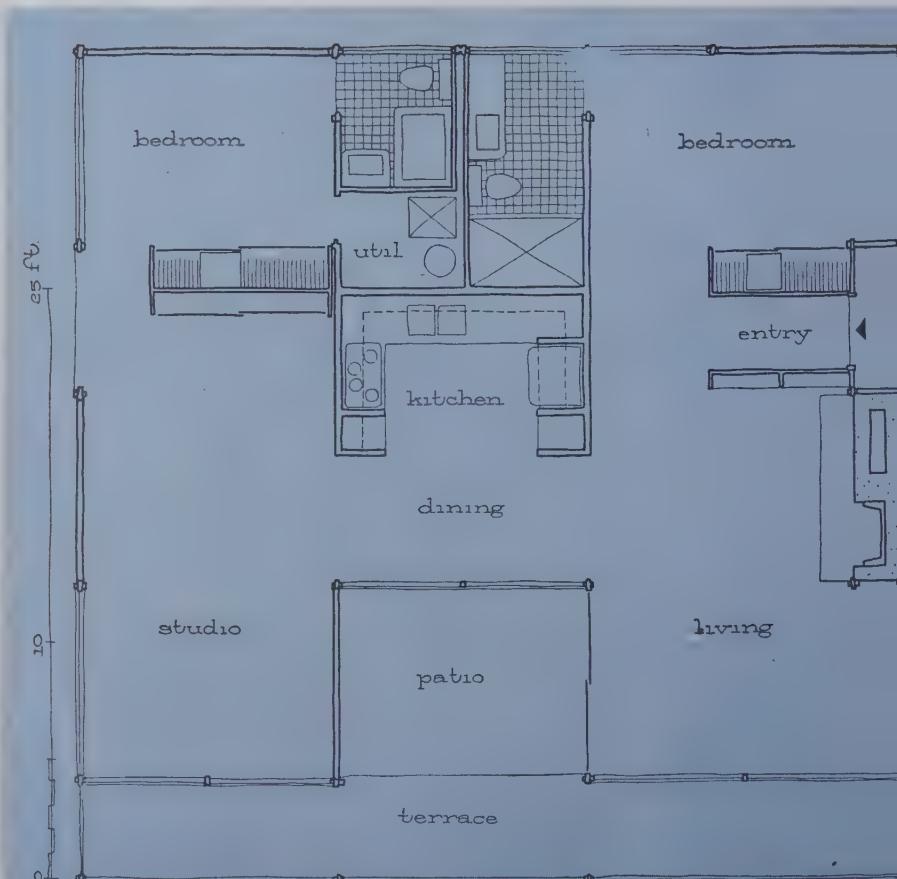
Architect John Hoops, in this hillside house, re-examines the **PATIO PLAN**



Plan of house is centered on utility core which contains kitchen, two baths and services. Core, patio and storage walls divide the plan into areas for sleeping, work and entertaining.



Structural bays are 11', 11', and 13'-7" wide, respectively. Terrace parapet is of waterproof plywood.





Central patio (above and below) forms an extension of all the rooms that surround it

This post-and-beam pavilion overlooking Sausalito is a fine example of several simple planning and building ideas. For example:

- All rooms center on a compact utility core, which divides the plan into areas for sleeping, work and entertaining.
- All daytime areas are grouped around a small central patio, which serves as an outdoor extension of the indoor spaces that surround it.
- A system of double-posts that hold beams between them. This eliminates the use of expensive, heavy timbers so often found in post-and-beam construction.
- A neat system of glass and plywood inserts between structural posts completes the building and gives it all the logic and grace of a Japanese tea house.

Architect John Hoops was trained at Pratt Institute, N.Y., and at Cranbrook. After some years in San Francisco, he moved to the Chicago office of Architects Skidmore, Owings & Merrill, where he is a senior designer./END

ARCHITECT: John Hoops

STRUCTURAL ENGINEER: John E. Brown

GENERAL CONTRACTORS: Gardner & Johnson

OWNER: Isabell Chesnut

LOCATION: Sausalito, Calif.



ROUND TABLE

Here are the unanimous conclusions and recommendations of a Round Table on architect and builder collaboration to assure better design for a million new homes a year.

The Round Table was jointly sponsored by the AIA, the NAHB, and HOUSE & HOME.

Joining in the report are editors of eight leading consumer magazines concerned with better houses, and representatives of the Realtors, the mortgage lenders, the appraisers, and the prefabricators.

Good design for a million houses a year is the architects' great new challenge—a challenge to help millions of Americans enjoy a better way of life in better homes in better communities—a chance to open up a major new source of professional income.

The architects can meet that challenge and realize that chance only by working with the merchant builders (who now build five houses out of six) and helping them offer better living for less money.

For young architects this challenge and chance should have a very special appeal, for here is a virgin field the older architects have passed by. Already the few young architects who have entered this field have achieved a success for which they might have had to wait years had they specialized in any other type of design.

Better design is at least equally important to the builders

It will tap a new market among millions of families already well housed, families who can be sold a new home only if it is far more desirable than anything now available to them. Better design offers builders their one best chance to keep new construction booming when the price of good existing houses drops back to its traditional level 15% or 20% below new house costs.

In the more competitive years ahead better design may be the No. 1 factor deciding which builder sells his houses and prospers, which builder fails to sell his houses and has to quit.

It is seven years now since architects and builders began talking up these obvious truths.

It is seven years since AIA and NAHB first gave them official recognition and set up Collaborative Committees to encourage closer team work between architects and builders.

Those seven years have not been wasted. They gave time for a few architect-and-builder teams to achieve outstanding success and so let others see that architect-and-builder collab-

oration can pay off in practice as well as in theory. They allowed time for enough architect-and-builder failures to reveal the pitfalls to avoid. And each year more and more builders began looking for an architect to help them with their problems.

But this is not the place to overstate the progress in architect-builder collaboration so far.

The sad and perhaps shocking truth is that after seven years and thousands of words . . .

The panel:

American Institute of Architects

L. MORGAN YOST, chairman
Home Building Industry Committee,
JOHN HIGHLAND, past chairman
Home Building Industry Committee,
THOMAS SCOTT DEAN, Dallas
CHARLES GOODMAN, Washington
GEORGE HAY, Philadelphia
A. QUINCY JONES, Los Angeles
RUFUS NIMS, Miami
DAN SAXON PALMER, Los Angeles
NICHOLAS SATTERLEE, Washington

National Association of Home Builders

MARTIN BARTLING JR., secretary
ALAN BROCKBANK, past president
THOMAS P. COOGAN, past president
JOHN DICKERMAN, executive vice president
ROBERT P. GERHOLZ, past president
RALPH JOHNSON, technical director
RAY K. CHERRY,
Hadley-Cherry, Inc., Los Angeles
STANLEY EDGE,
Sampson-Miller Associated Co.'s, Pittsburgh
JOSEPH L. EICHLER
Eichler Homes, San Francisco

Prefabricated Home Manufacturers

RICHARD POLLMAN, Chairman, Design Committee
Pollman Homes Corp.
FRANK P. FLYNN, JR.
National Homes Corp.

American Bankers Association

THOMAS L. NIMS, secretary
Mortgage Division

American Institute of R. E. Appraisers

A. N. LOCKWOOD, president

American Society of Landscape Architects

LESTER A. COLLINS

Lenders, realtors, appraisers, editors all join to urge closer architect-builder teamwork

Not more than 100 architectural firms from coast to coast have taken an effective interest in working with the merchant builder and qualified themselves to give him the difficult, exacting, and highly specialized kind of design service he needs;

Not more than 2,000 builders from coast to coast are ready to let an architect do more than a face-lifting job on their product or willing to pay a fee big enough to let him do an all-out job of designing better living into their houses.

In a few cities where builders can see local examples of how well architect-and-builder collaboration can pay off, scores of builders are now trying to team up with architects—some for superficial service, some for full collaboration. But there are still many important cities where no builder has yet turned to an architect for help, and there are whole states where the builder, if he tried, would find it hard to come upon an architect ready and qualified to meet his needs..

It is high time to find out why. Why has progress in architect-and-builder collaboration been so slow? What can be done to get it moving faster? To answer these questions was the purpose of this Round Table.

We have agreed on 15 reasons why past progress has not been faster.

Some of these reasons involve money and fees—but money is not the heart of the problem.

Some of these reasons reflect todays confusions over changing styles and taste—but better design is not a matter of style.

Some of these reasons are up to the architects and builders to cure—but others cannot be met without changing the design attitudes of the Realtor, the appraiser, mortgage lender and the government agencies, too.

All 15 reasons are facets of one big reason:

There is not enough understanding between architects and builders, and not enough understanding from Realtors, appraisers and lenders. Because there is not enough understanding there is not enough respect for the contribution each could make, not enough willingness to seek and take advice, not enough eagerness to learn one from the other.

So all our reasons can also be summed up in one:

We need better team work based on better understanding and greater mutual confidence.

National Association of Real Estate Boards

EUGENE P. CONSER, executive vice president

National Savings & Loan League

HAROLD P. BRAMAN, executive vice president

US Savings & Loan League

NORMAN STRUNK, executive vice president

Producers

ROBERT W. LEAR, general marketing manager
American Radiator & Standard Sanitary Corp.
TYLER S. ROGERS, technical director
Owens-Corning Fiberglas Corp.

Magazine Editors

PETER BLAKE, architectural editor, House & Home
HUBBARD H. COBB, building editor, American Home
MARY HAMMAN, modern living editor, Life
MARY KRAFT, director, building forum
Good Housekeeping
MAXINE LIVINGSTON, family home editor, Parent's
ELIZABETH MATTHEWS, home furnishings editor
Woman's Home Companion
WILLIAM MEHLHORN, architectural editor
House & Garden
JOHN NORMILE, building editor
Better Homes & Gardens
JOHN PETER, home living editor, Look

Life Insurance Institute

JOHN G. JEWETT, vice president
Prudential Life Insurance Co.

Government Observers

NEIL CONNOR, director
Architectural Standards Division
Federal Housing Administration
CHARLES HOPKINS, construction valuation
service,
Veterans Administration

Moderator

P. I. PRENTICE, editor and publisher
HOUSE & HOME



Bartling: Architects ought to recognize that home building takes an entirely different design approach.



Normile: Flops are made by good designers and good builders, because there is not adequate consumer research.



Goodman: The real obstacle is the lenders' and appraisers' attitude toward forward-looking design.



Conser: More and more realtors are learning to help builders sell good design.



Nims: The merchant builder is primarily a manufacturer and his architect is his industrial designer.

All photos except where marked by Walter Bennett



Flynn: Low appraisals often keep good design from selling.

Here is what we all mean when we say the builders need much better design:

Better design means design for better living and more delight in your surroundings, indoors and out. It means much more than lining up the windows, cleaning off the gingerbread, unsplitting the banan split, and using better color—important though all these are. Specifically . . .

It means design that will make it easier and pleasanter for people to live the way people want to live today, which is often quite different from and less formal than the way their fathers wanted to live.

It means design for more enjoyment of the land (which is the biggest reason people move to the suburbs).

It means design for pleasant spaces to see through the windows and pleasant spaces to use outdoors. It means design for coordinated indoor-outdoor living.

It means design for fuller use and multi-use of space.

It means design for privacy where privacy is needed, and openness where openness makes sense.

It means design for easier house work when few even pretend they have servants.

It means design for more family life and for more children.

It means design for better storage, so people can get more pleasure and use of their belongings.

It means design for maintenance economy, which means—among other things—better orientation, wider overhangs, right use of materials.

It means design for building economy, for every cent of waste squeezed out leaves just that much more for better living.

It means better tract planning, better land planning, better siting, better landscaping, and more trees.

It means planning better neighborhoods and better communities.

It means design that will achieve variety with dignity, good taste and good proportion.

Above all, it means design that will integrate all this commodity of better living in the delight of a simple and harmonious whole that will rest the eye and satisfy the emotions—design that will make the buyer proud of his home and the prospect eager to buy and move in.

What about contemporary design?

We believe today's architecture should mean using today's methods and materials to provide this better living for today. It should not be a matter of style or clichés.

The essential difference between today's new architecture and the so-called "traditional" design is not that the new architecture usually uses larger glass areas, fewer and larger openings, lower roof pitches. The essential difference is . . .

1. The new architecture tries to hold costs down by taking full advantage of today's materials and methods, whereas traditional design often uses materials and details better suited to yesterday's handicrafts than today's mechanized construction.

2. Today's new architecture starts by planning for better living first, before it tries to make the house look as good as it is; whereas traditional design usually starts by deciding what the house is to look like, before it tries to make the house as good as it looks.

Here are 15 reasons why architect-and-builder collaboration has progressed so slowly:



Connor: Before FHA can make evaluations they have to go back to what the market will pay.



Jewett: Our men aren't hired to be architectural critics.



Collins: One of the great lacks is in the relationship between builder, architect and architectural schools.



Eichler: I personally have seen everybody that lives in one of our 3,500 houses. They tell me what I ought to do with the next house I build.



Peter: A way of life not only includes the site but the way people want to live.



Lear: I don't see how any builder can deny that he needs advice and help.



Coogan: Architects don't get their fee because they aren't delivering what they claim they're selling.



Hay: I'll be starving to death after all this—I'm a bachelor, I don't use much money.

1. Too many builders have found it easy to sell houses without good design. Too few builders realize how fast the market is changing now that the housing shortage is over. Too few builders realize that in the highly competitive markets ahead it will be harder and harder to sell houses with Model T design. Too many builders still hope that more gimmicks and gadgets will keep their houses selling.

2. Too many established architects are too busy to bother with a new field, and too few young architects realize what a wide open opportunity the production house offers them (see p. 153).

3. Too many architects think small about working with builders. Too many architects think designing and engineering production houses is easy. Too few architects realize it is among the most difficult of all architectural disciplines (see p. 153).

4. Too many builders think small about the value of an architect's services. Too few builders are willing to pay an adequate fee for such exacting work (see p. 154).

5. Too many builders think they alone know what design the public wants. Too few builders realize how many good new architect-developed sales appeals they are missing.

6. Too many architects, conversely, think they already know all the answers. Too few architects realize how many good economies the builders can teach them.

7. Too many builders think an architect would waste their money on costly details and methods. Too few builders understand that a really well-designed and well-engineered house should cost not more but less to build. Too few builders realize that with the right team work the architect can often teach them many new ways to build better for less.

8. Too few builders realize that the right architect's special training could help them every step of the way—advising them about the land they are thinking of buying, helping them lay out their tract and make the best use of their lots, helping them find subcontractors familiar with the kind of construction his design calls for, helping them pick and specify better products and materials, re-working details that prove costly and modifying plans as customers react to the model house.

9. Too few architects have any contact with local builders and too few builders have any contact with local architects.

To improve that local contact, we suggest that local AIA chapters might well invite the local NAHB president to address them once a year and vice versa. We suggest that architects interested in production house design should join as associate members the local NAHB unit (where they would be more than welcome), attend its meetings regularly, get to know the members, talk to them about their problems and so allow time to win the builders' confidence. This would not conflict with their AIA membership.

10. Too many builders think of the architect as an artist they can call in almost at the last minute to pretty up the appearance of their houses. Too few builders realize that good design must be more than skin deep, that good design means design for better living as well as better appearance (see p. 152).

11. Too many builders think of design in plan-book terms. Good design must always be tailored to local tastes, local temperatures, local prevailing breezes, local availability of materials, local construction economies. Good design for one site can be bad design for another; often the right house for one side of the street would be wrong on the other.

12. Too few lenders and appraisers encourage better design by giving it adequate credit in their valuations. Too few understand the sound and practical reasons behind all the changes architects are introducing into house design. (See Section VIII). Too few realize that public taste in houses has always changed from decade to decade and is changing faster than ever now. Too many think yesterday's house will still be a best seller tomorrow and penalize progress in their valuations.

As one immediate result of the Round Table the American Institute of Real Estate Appraisers is urging all its chapters to invite a leader of the local AIA to speak at any early meeting and tell the appraisers more about what is new and why in better design.

13. Too few Realtors understand how to sell the better living the architects try to plan into their houses.

14. Too often FHA and VA give too little credit for better design in their valuations (see section VII).

15. Too few architects realize how many builders are sincerely interested in offering the very best house they can sell at a given price, how many builders are less interested in making a quick profit than in establishing a lasting reputation for offering good values in good neighborhoods.

Production house design is a very difficult type

of architectural practice, because . . .

1. It calls for planning so much into so little space.

2. It requires an intimate understanding of construction methods often quite different from those used on custom houses. It means weighing the saving offered by any unfamiliar method against the cost of teaching the subcontractor a new trick. And sometimes the method that is cheapest for one builder and his crews will spell added expense on a nearby project.

3. It requires far more pains to minimize waste. A \$2 saving on a single house becomes a \$100 saving on 50. One builder and his architect found it profitable to detail a roof three different ways and then clock the carpenters to see which took the fewest man hours.

4. It requires special attention to smooth scheduling (which is perhaps the biggest single economy the production builder has brought into home building). Often a method which has proved itself more economical on a single house will run up the cost of a production house by upsetting the scheduling of crews or the scheduling of inspection.

5. It calls for the most intimate knowledge of what feature will get full credit from local FHA, VA, and other appraisers, and what features will just run up the down payment. It means knowing the MPR backwards and forwards. It also requires an intimate knowledge of

how FHA, VA and local inspectors think.

6. It means designing to standard dimensions, so you can use standard parts and sub-assemblies that will fit together with as little on-site labor as possible.

7. It means designing for an unknown client, a client to whom the architect can never explain why this or that feature would make the house pleasanter to live in or cheaper to maintain.

8. It means designing houses for a lower income group than the income group most architects serve in their custom-house practice, an income group with whose tastes, prejudices, and preferences many architects are unfamiliar. It means designing for an income group that is not as sure of itself, not as familiar with the best new ideas in modern living, not as ready to experiment.

9. It means designing a common-denominator house for a composite customer, which is completely alien to the architect's whole training to create something special to meet the special needs of a particular client. It means designing houses that will appeal to a broad range of tastes and cultural backgrounds —houses to attract second time buyers and houses for people who have always lived in apartments, houses that will appeal alike to those who want to be thought smart and those who would rather be thought solid and substantial.



Cherry: The architect should be a clearing house for the use of new materials.



Jones: We should get all our clients together and work as a team for a fine looking community.



Gerholz: Some architects offer us more service than they can deliver.



Hopkins: VA offices can accept plans which are certified by architects we approve.

Here is a fine chance for young architects

Recently some of America's very best and best known architects—men who built national and international reputations for the fine custom houses they designed for single clients—have recognized the importance of the production house market and have begun designing production houses. Among them we might name (panel members excluded):

Anshen & Allen	Mies van der Rohe
Campbell & Wong	Alfred Parker
Curtis & Davis	The late Burton Schutt
Vernon De Mars	Smith & Williams
DeWitt & Swank	Raphael Soriano
Victor Gruen	Hugh Stubbins
The Keck Brothers	Oskar Stonorov
Carl Koch	Royal Barry Wills
George Matsumoto	Minoru Yamasaki
Wurster, Bernardi & Emmons	

Even Frank Lloyd Wright himself has been working with his builder son-in-law on a tract of houses for sale in Phoenix.

The interest of such outstanding architects is raising the prestige and dignity of a type of architectural practice

which at first did not enjoy as high a standing in the profession as we believe it should. It would be hard to overestimate the importance of this added prestige.

But none of us expects established architects to play as big and important a part in designing production houses as the newer men.

Today's successful architects are already too busy. Only the newer men have the time to apprentice themselves in the architectural firms which have pioneered in this type of practice. Only the younger men can afford to go out and take jobs on the builders' tracts to study first hand the very special problems of production work.

So young men head up most of the firms which now do the biggest volume of production design, and these young men have won in a few years a success that would almost certainly have taken much longer to achieve in any other architectural field?

What about money? What should a builder pay?

What should an architect ask for volume design?

Ten years ago builders just lifted their designs from plan books, at a cost of not over \$10 a house

Ten years ago architects designed only custom houses, on which their standard fees of not less than 6% ran from \$1,000 a house up.

Architect-and-builder relations are still bedeviled by memories of those widely divergent figures. Too many builders still start their design fee thinking at the plan book level and wonder why they should pay even \$25 a house. Too many architects still start their builder house fee thinking at the custom house level and wonder if it would be even ethical (not to mention profitable) to take less than 6%.

Both attitudes are impossible

Six years ago the AIA formally recognized that designing production houses had more in common with industrial design than with traditional architectural practice. Six years ago AIA agreed that its recommended percentage fees for custom work could not and should not apply. Six years ago AIA agreed that production house design should be compensated on an industrial design basis.

Six years ago the NAHB recognized that plan book design was no answer to the industry's needs and urged its members to associate themselves with local architects on a mutually profitable basis.

Now let's be more specific:

The ten architects on our panel have widely different methods of charging for their services to production builders. Most of them ask a basic fee to cover their basic design which may run \$3,000-5,000 for all the work needed to assume maximum economy on a production

Builders expect to pay the price for everything else that goes into their houses.

They pay high wages for their labor, big fees and discounts for their money, high prices for their land. There is no sensible reason why an adequate architect's fee should be the only cost at which builders balk.

All of us agree it is nonsense for an architect to expect custom house fees on production work. Conversely all of us agree it is penny wise and pound foolish for a builder to think he can save money by paying the architect too little.

Conditions vary so widely from job to job that we cannot recommend any standard schedule of fees or royalties. But here are some points on which we all agreed:

1. Designing a small house is harder than designing a big one, and designing a production house calls for much more time and pains than designing a once-only house.

2. The architect's work is only half done when the basic design is finished and accepted. He must offer far more than such a localized plan-book service. He must give special attention to each separate house to fit it to its site, to get proper orientation and to create harmony of color, texture, and scale along the street.

model plus a royalty for each repeat to cover their added costs for varying the basic design and fitting each house to its site. Most of them believe it is impossible for an architect to offer full service for a fee that scales down to less than \$100 a house overall on even the biggest tracts of moderately priced houses. Several of them get up to \$500 a house in \$30,000 to \$40,000 developments, for in that price range each house requires special design. Only two of them scale their fees down under \$100 a unit overall on tracts of 100 low cost houses (one gets down to \$35 when the same plan is repeated 500 times).

All of us believe the question of fees will work itself out fairly easily and quickly as more architects learn how to give builders the design help they need and as more builders learn how much the right architect can do to cut their costs and improve their sales.



Yost: Mediocre houses sell because they get financing.



Chase Studio

Johnson: One of the problems is the appraiser and how he interprets value.



Palmer: The number one service of architects is good design—but they must understand what every item in the house costs.



Brockbank: A builder may be dedicated to doing something for his community but if his architect designs something that won't sell, he won't do much for the community very long.

Strunk: We're definitely going to encourage better design.

FHA and VA should help more than they have

FHA and VA could help in many ways to speed the progress of architect-and-builder collaboration. At the very least they should give the builder clear and firm assurance that they will include his full architect's fee in the cost estimate that goes into their valuation. More important, they could and should give more credit for good design in their appraisals and tell their appraisers not to penalize new ideas in their valuations.

Up to now FHA has actually depressed the market for architectural services by including in its cost estimates only "whatever is the local custom for architects' fees." In practice this has usually meant giving all builders the same \$25 credit whether they actually paid their architect \$7 or \$150. FHA headquarters in Washington disapproves this \$25 leveling off and does not deny that it has had a most unfortunate influence.

Another way FHA and VA could encourage builders to employ architects would be to extend and clarify the two-year-old VA practice of letting builders by-pass the pre-appraisal review of their plans if a licensed architect certifies that they meet FHA's minimum property requirements. This certification can often save six precious weeks, but most architects and builders are afraid to use it because they do not know what would happen if FHA or VA later decided the architect had misinterpreted some ambiguous requirement.



Photos: Louis Reens

TWO YOUNG MEN BUILT THIS HOUSE

BUILDER: Sheffield Building Corp.
ARCHITECT: William L. Landsberg
DECORATOR OF MODEL: Eva Phyl
LENDER: Dime Savings Bank of Williamsburgh
MORTGAGE BROKER: LoPinto & Kelly
TERMS: FHA 203(i) loans, \$489 down
LOCATION: Selden, L. I.

"This house, nearly everyone told us, would never sell, even if we could build it for \$7,000."

Eugene Farrow, 29, and Phillip Kallenberg, 35, told the story at their Selden, L. I. development where the first 47 of their 130 contemporary houses are going up. All have been sold to buyers qualified for loans under FHA's section 203(i). This section, limited to houses selling for under \$7,000, allows builders to omit about \$1,000 worth of work and materials which buyers can add later.

"We thought it best to break into home building in the low-price bracket," Farrow said. "We wanted to offer something different. For a while we were stumped. We looked at a lot of plans but they left us cold, and at \$7,000 you can't do



Builder Eugene Farrow (left) is 29; his partner Phillip Kallenberg is 35. Farrow formerly worked as troubleshooter for a builder of shopping centers. Kallenberg was a plastics merchandiser before the two formed Sheffield Building Corp. in 1955.

TO SELL FOR \$6,999

much to change them. Time was running out, too—we had optioned our land and summer was almost on us."

That was when—and why—they approached Kallenberg's neighbor, Architect William L. Landsberg, with a radical idea. Could he do a flat-roof 960 sq. ft. house to sell for \$7,000?

Architect and builder worked together

Landsberg agreed to take on the problem on a royalty basis. He laid out the floor plan for four bedrooms and gave the house its handsome lines. He and Farrow worked closely, the architect showing ways to cut costs, Farrow guiding on methods that fit Long Island's special building practices.

"When we took the finished plans around," Kallenberg

recalls, "we got the same reaction from almost everyone. They liked the floor plan but nobody thought we could sell it with the flat roof."

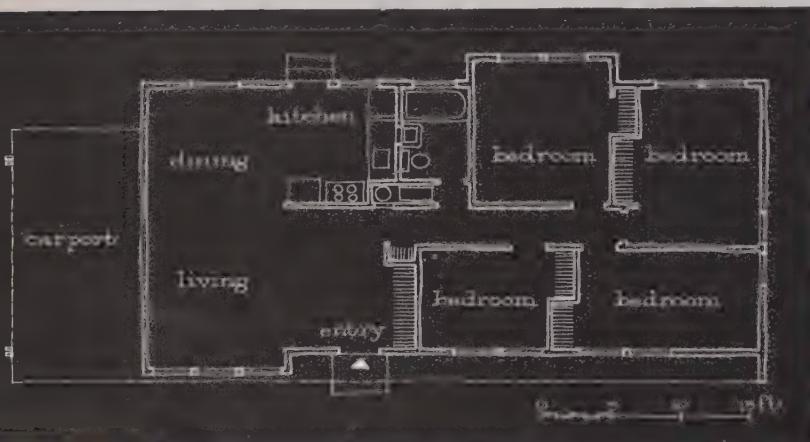
"But we had a few encouraging things on our side," Farrow added. "Our lumber dealer liked the design so much he scarcely looked at our financial statement. Our mortgage man liked it so much he agreed to take all the loans. He said he was sure the house had a high long-term value."

"We went ahead, figuring there must be 130 people among New York's millions who would like a chance to buy a flat-roof contemporary house. And even if there weren't, there ought to be that many who would live in one if it meant they could get the extra space we could give them."

Here is what the flat-roof house offers for \$6,999

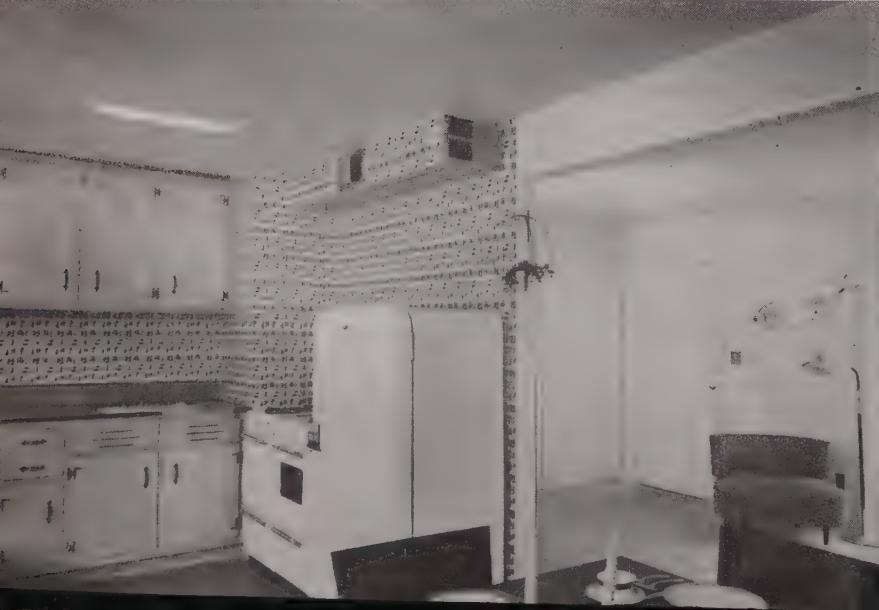


Eave over front window of living room affords fairly good protection from sun, adds to appearance. Front siding is cedar.



Tightly planned house has 960 sq. ft. of living space, with four bedrooms. It is 56' wide, including carport, and 20' to 22' deep. The plan emphasizes maximum living space on one level.

Living and work areas are all open to each other, receive ample light from floor-to-ceiling windows at front and rear. Coat closet is provided next to front door. House is heated by overhead warm air ducts. Long hallway (right) viewed here from bedroom toward living area, makes house seem larger.



Farrow and Kallenberg include the following features in their selling price of \$6,999:
Poured concrete foundation.
Weather-tight windows, some floor-to-ceiling.
Ceramic tile on bathroom floor and walls.
Colored bath fixtures.
Plastic kitchen counter-top.
Linoleum on kitchen floor.
52 sq. ft. of closet space (doors included).
Copper plumbing lines; hook-up for washer.
Gas-fired forced-air heating through ducts to all rooms (providing 100,000 Btu's for house rated to require only 75,000).
60-amp. entry box and 220 volts; circuit breaker; switches controlling lamp outlets; built-in hall and kitchen light fixtures.

About \$1,000 more would complete the house

The builders estimate that less than \$1,000 more would cover all their costs for adding the following to meet FHA's standard MPR requirements: finish flooring, \$150; landscaping, \$80; driveway, \$70; painting the interior, \$300; more cabinets, \$60; a range, \$125; $\frac{3}{4}$ " instead of $\frac{3}{8}$ " sheathing, \$60; more wall insulation, \$85. This shortcoming in insulation would cost the buyer about \$200 to remedy after house is built. First ten buyers installed insulation themselves in walls during construction.

The houses were sold under FHA's section 203(i), intended to make it easier for do-it-yourself buyers to make down payments and complete the houses at a later time.



Here are two ways they saved

on roof construction

1. This "flat-roof" house actually has a slight pitch— $5\frac{1}{2}$ " across 20' to 22' from front to back. The pitch permits rain to flow off readily but at a rate slow enough to reduce the need for a gutter, the architect says. It also eliminates the need for an expensive tar-and-gravel roof. Architect Landsberg specified a 36" rolled 90 lb. felt roofing laid with a 17" overlap, which he considers as serviceable as tar-and-gravel though less attractive. "In fact," he says, "this rolled roofing gives better covering at the coping, which is where most leaks develop." The builders estimate they saved about \$200 by using this type of roofing.

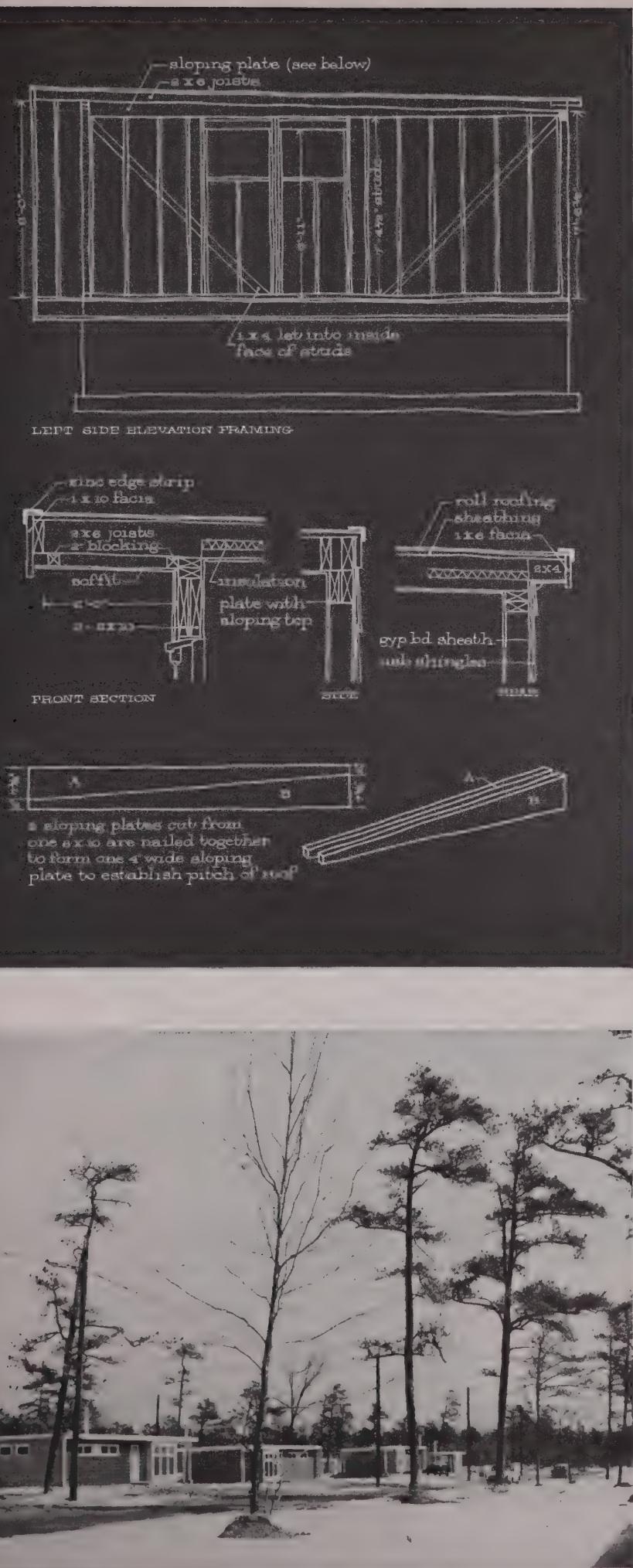
2. Despite slope of roof and ceiling, all side wall studs are the same length, thanks to the ingenious device of a sloping plate to support the 2 x 6" joists. This plate is easily formed by cutting one long 2 x 10" lengthwise (see drawing) to obtain two similar pieces which are nailed side-by-side to form a 4"-wide sloping plate over the 2 x 4" studs and under the 2 x 6" joists.

Cost-cutting held the price

to \$6.45 a sq. ft.

To keep costs at a minimum, Partner Farrow and Architect Landsberg worked together closely on construction and design so that they could (1) hire regular subcontractors in the area and (2) still use all these cost-saving building methods:

- Precutting all framing material.
- Tilting up exterior walls, assembled on the floor at one time.
- Laying the entire floor before partitioning.
- Applying wallboard on both ceiling and side walls before partitioning.
- Using a double wall around plumbing.
- Using mastic to install tile on walls.
- Using weather-tight windows to eliminate later service calls.
- Using local crews wherever possible because: local men can (1) handle service calls easily, (2) help get town officials to approve the development and (3) bring around friends to buy, or sometimes even buy themselves.
- Paying slightly more for 20' and 22' pieces for full-length joists rather than buy shorter lengths and pay more for carpentry (about 4 minutes less is needed to put up roof joists when full-length are used.) /END.



First 47 houses are being completed this spring. Eighty more, already sold, will be built in summer. Trees are saved wherever possible, even on side lots.

IN THIS BARN, A YOUNG LUMBER DEALER . . .



Business of Building

... TURNS OUT 700 LU-RE-CO HOMES A YEAR

Six years ago at 26, Carl Scholz switched from building contractor to lumber dealer. He set up his first "yard" in an 8' x 10' shed which contained a chair, a stove, six open kegs of nails, a telephone, a plywood board for a desk—and 6'-3" Scholz.

At 32, Carl Scholz runs a lumber yard which does better than a \$500,000 annual volume in Vandalia, Ohio (pop. 4,000). In addition, he produced and sold nearly 700 Lu-Re-Co panelized houses last year, and present orders point to a bigger volume in '56.

His success has not gone unnoticed. Scores of lumber dealers from around the country have visited this young man to learn his secret of success as a Lu-Re-Co producer and hear what he thinks of this end of the business. They find him enthusiastic about Lu-Re-Co.

"Lu-Re-Co helps our regular lumber company

business," Scholz says, "because business gets business. We attract more customers and handle more lines. Vandalia Lumber has doubled its retail volume since we started panelizing houses.

"Furthermore, we can make a profit on some items we'd otherwise sell for no profit. Other lumber yards have loss leaders in certain lines and we have to meet them. But when we sell such material as part of our Lu-Re-Co package, our profit on it is included as well as on everything else."

Scholz thinks Lu-Re-Co houses can be sold to local builders with these five advantages over out-of-town prefabricators: (1) delivery cost is lower; (2) deliveries can be held up quicker if rain starts; (3) various components can be delivered when needed; (4) if parts are missing, they can be sent out quickly; (5) overhead is lower.

Carl R. Scholz

Here is how Scholz assembles components



Hoover Photos

Scholz has a minimum investment in the Lu-Re-Co end of his operation, although he employs 15 men to handle it compared with only nine in the lumber yard. Crew includes two on panels and two making gables (above, left), two making trusses, one man on plates and beams, two who cut all lumber, an accountant, a superintendent, and four on deliveries. Power equipment includes two radial saws, a table saw, a few hand tools, two forklifts and four trucks and trailers. Usual Lu-Re-Co panels are 4' wide, but some (above, right) are produced in 12' lengths—a Scholz adaptation to suit the needs of his largest builder client, Victory Construction Co.

Here is how he cuts material handling costs



Two semitrailers and two 1½-ton stake trucks deliver the components in Vandalia and to Dayton (10 miles away). Scholz designed the truss trailer, which carries 23 trusses. This rig and friction-plate "fifth wheel" on jeep chassis cost only \$1,000 to build locally. Another semitrailer carries panels. Both deliver to builder's site together and the two drivers help each other unload. One stake truck handles trim, the other rough hardware, etc., and these drivers also help each other unload. Two forklifts are used in Lu-Re-Co plant and yard. Forklift in picture at left holds all the outside panels for one house.

Photos: Rube Henry, Hedrich-Blessing; courtesy of Business of Building



Builders like the speed and ease of construction



which the Lu-Re-Co panel-and-truss system provides



Scholz grew from a shed to a big modern lumber yard . . .



. . . in six years by following these eight rules

1. Find time for new ideas. "The difference between the average lumber yard and an aggressive one is that the average yard allows its men to become bogged down under a full load of business. They haven't time for new ideas. The aggressive yard brings in new men to take charge of each new department or service growing out of each new idea learned."

2. Accept new ideas courageously. "For example, you can't play around with the Lu-Re-Co idea. You must be willing to take a big contract at the outset if the opportunity offers."

3. Keep the regular lumber yard and Lu-Re-Co business separate. "The fault with so many lumber dealers is that they won't put on a force to handle Lu-Re-Co. They try to sandwich it in with their regular business. That method just doesn't work too well."

4. Pay more attention to net profit, less to mark-up. "I'm not interested in mark-up. I'm willing to take a low mark-up if I can make more money by doing a much larger volume of business."

5. Make sure you have a "driver on the job." Scholz himself works about 80 hours a week. Currently, about 50 are spent on Lu-Re-Co and during most of that time, Scholz helps buyers.

6. Offer all the services you can. "As far as Lu-Re-Co customers are concerned, for most of them we do everything except build the house. We help them find lots, get construction money and loans, fill out FHA papers for them, recommend good bookkeeping systems, help with floor plans and help them find good subcontractors."

7. Make sure each employee specializes. "Find good men for each job and give them plenty to do. A steady team making trusses can turn out 60 a day at a wage cost of only 90¢ per truss. Even a good delivery man on a truck can save you 50%."

8. Cut delivery costs to the bone. Scholz knows Lu-Re-Co offers lumber dealers a great advantage over out-of-town prefabbrics in delivery and makes sure that no chance is lost to capitalize on this advantage.

. . . and the biggest client is the biggest booster

Victory Construction Co., Dayton, has built about 600 of Scholz' houses in less than 18 months, all in Vandalia and the Dayton area. This year it expects to build about 1,000 houses, several hundred in Cincinnati and other cities. "We'll use prefabs in other markets," says Victor Napolitano, president, "simply because we can't find people like Scholz handling Lu-Re-Co elsewhere. He's very efficient, has good men around him and gives his personal attention to our needs." Napolitano prefers Lu-Re-Cos to prefabs in Dayton because "Lu-Re-Cos are more flexible and you don't have any worries about damage or missing parts. Lu-Re-Cos are a cinch to put up, especially since Scholz supplies 12' panels." Victory Construction's 1956 houses have 1,100 sq. ft. of floor space, sell for \$14,400.



LIFE: Lisa Larsen

On the following pages, HOUSE & HOME reviews memorable aspects of four houses which have had a marked influence on contemporary work. Designed by Frank Lloyd Wright, they were first published in earlier issues of this magazine.

FRANK LLOYD WRIGHT

Photo: Taliesen Fellowship



A young man
thinks young all the days of his life.
His eyes see every day
as if yesterday existed
only to deepen understanding
and to sharpen the joy of discovery.
What does he discover?
Perhaps, something as simple as the way
rough stones feel . . .
... or as intricate as a new way to put
stones together
so they look the way they feel.
He discovers the world, with wonder
seeing it—always—
with the eyes of youth.

For other young men
men who have not been young for very long—
he is a teacher . . .
... he points out the stones.
He finds ways to measure and express the world.
He builds for them the wonders he finds.
And because he has the wisdom of years to
balance the youth in his heart
His building helps them to find and shape
their own discoveries.
He is a beginning, never an end . . .

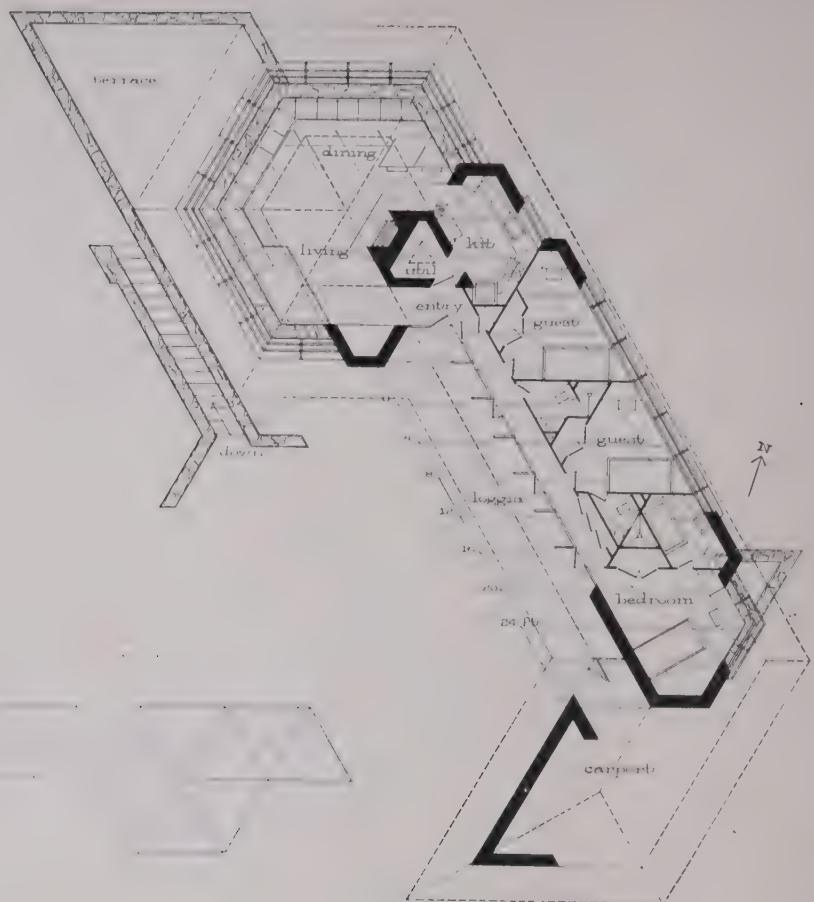
House in South Bend, Ind. H&H, Dec. '55; photo: Ezra Stoller



Years before the world had heard of indoor-outdoor living, Frank Lloyd Wright opened up his houses to the world outside with great windows, so that the boundaries of a room stretched "as far as the eye can reach." Diagonals in this big living room window

wing upward, form a counter-point to the wide angle high pitch of the ceiling which is etched with slender wooden strips. For all its monumental scale, the room is warm and human with its below-ceiling light cove and its friendly corner fireplace.

This little house is indeed a lesson in planning. Frank Lloyd Wright lavished the infinite pains of genius to fit all the many spaces together so that every inch would count, to make little rooms spacious where spaciousness was needed, to make all the living areas seem bigger than they really are. Using as a module a 4' equilateral triangle, or doubling it to make a diamond, he achieved an in-line plan with three bedrooms, three baths, kitchen, 400 sq. ft. living area—all in 1,000 sq. ft.!



House in Carmel, California, H&H Mar. '54; photo: Roger Sturtevant



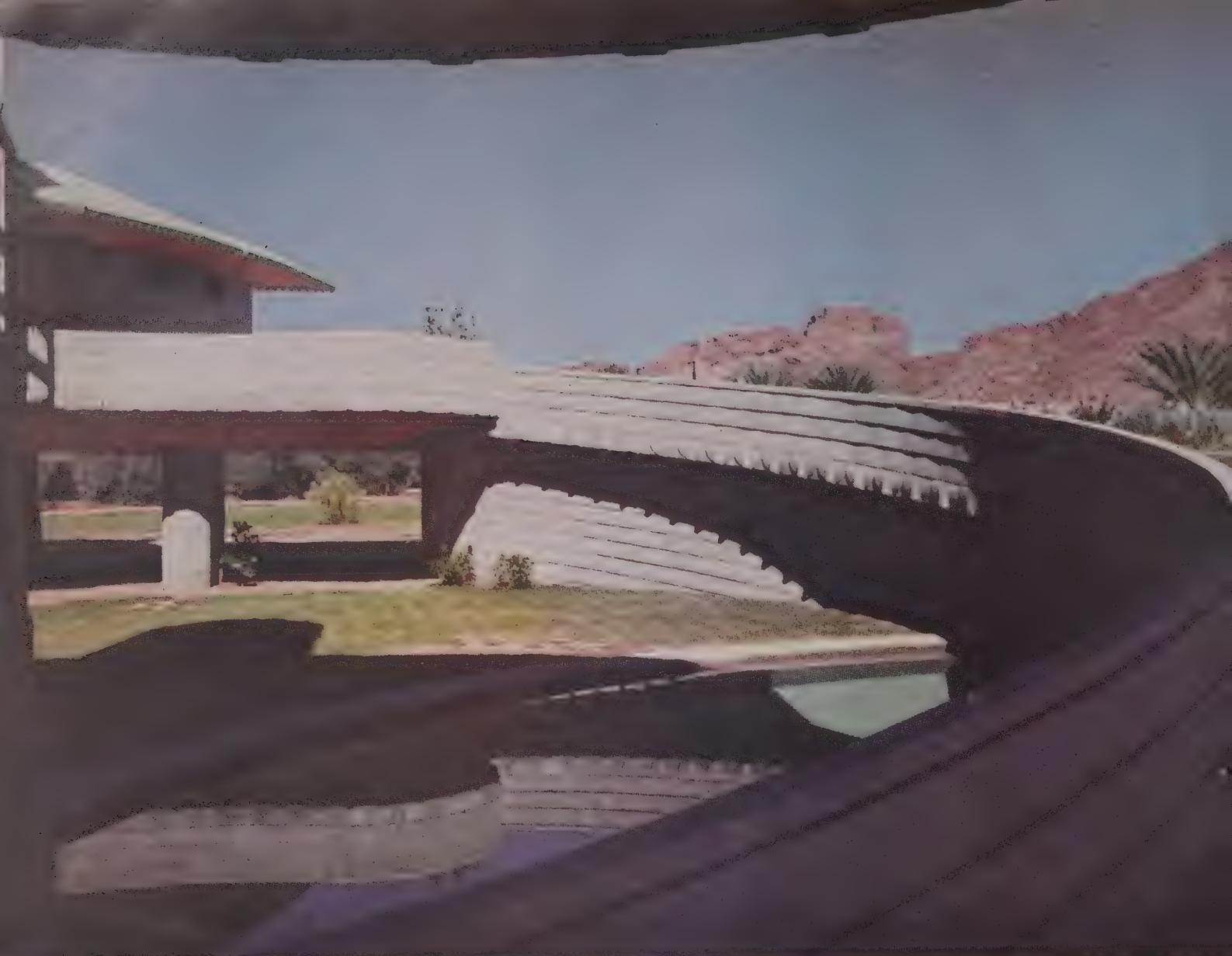


House in Minnesota, H&H, Nov. '53; photos: P. E. Guerrero

Perhaps Frank Lloyd Wright's greatest influence has been his deep concern for the inseparability of house and site. His houses are one with their surroundings—seldom more evident than in this house, with its sweep of protective gables and slanting battlements of masonry that seem to grow right out of the ground. Even the colors blend house and grass, trees and sky.

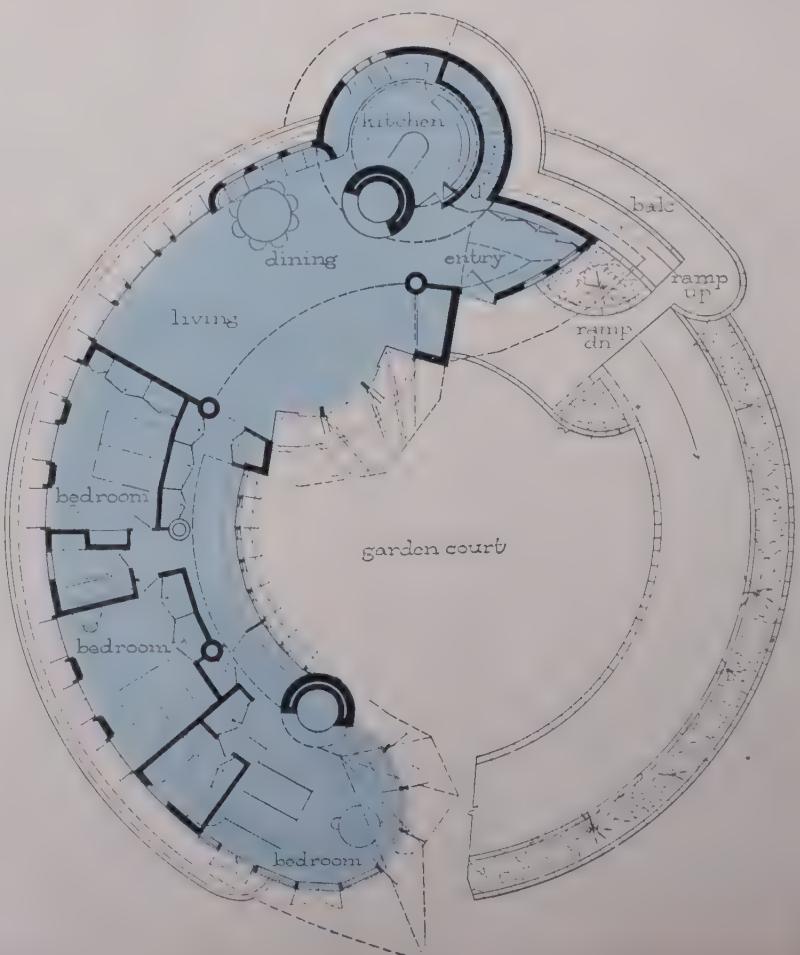
At right, a detail shows how many things contribute to this harmony of land and house. The overhang is broad to shelter a path which ties indoor rooms to outdoor vistas.





House in the Desert, H&H, June '53; photo: Ezra Stoller

The infinite possibilities which a good material possesses are an ever-changing challenge to Frank Lloyd Wright. His use of concrete block was never more daring than in this strange and wonderful desert house. Wright's ideas have changed the course of architecture for more than 60 years. They have changed it because the ideas are so challenging in themselves and they have changed it because Wright drives the ideas home forcefully and dramatically./END



CLARENCE STEIN

LAND PLANNING'S MAN OF INFLUENCE

Every architect, engineer or land planner who ever laid out a cul de sac, designed a super block, built green areas around houses or apartments, faced living rooms to rear gardens or planned safety streets for children owes a debt to Clarence Stein.

Nearly 30 years ago Stein and architect Henry Wright began planning Sunnyside Gardens in Queens, New York City. That was the beginning of a series of admirable and farsighted plans. In all he has completed about a dozen such projects.

The circle of Stein's influence has steadily widened. In Canada today the largest of the new towns, Kitimat (being built by the Aluminum Co. of Canada, with Stein as planning director and Mayer & Whittlesey as architects and land planners) is exerting an influence on other new towns around the world.

In Sweden, the newest of Stockholm's big suburban communities is a lineal descendant of Stein's Radburn. The street layouts of new towns in India show some of his trademarks. And closer to home, a large new development was recently announced in Memphis as "A Radburn-type subdivision."

There is talk today that builders are erecting "the slums of the future." Few would deny that land planning is the feature that could be most improved. To improve it, builders would do well to study Stein's designs. They are so well planned that his communities are always good places to live and they improve with age.

This month in Los Angeles, to Clarence Stein's long list of honors and distinctions, the American Institute of Architects will add its highest award, the AIA Gold Medal.



"Clarence Stein is a quiet man, with no itch for publicity," says critic Lewis Mumford. But to professional land planners and graduate students Stein's words and his plans carry great weight. Below: Stein explains Radburn to MIT students during Easter holidays last month.

Walter Daran





Detached houses like these and row houses have cul de sac auto entrances at the rear, pedestrian walks like this at the front. Many face on a large, green park. Because of excellent planning and landscaping, 25-year-old houses are today valued at far more than ever before.



RADBURN, N. J.

1929 plan for Radburn shows original ideas of Stein and Henry Wright with superblocks replacing the usual narrow, rectangular blocks; specialized, 1-purpose roads with service lanes for direct access to buildings; collector lanes around superblocks; express highways. Some plan details were changed before project was completed.



Radburn idea, says Stein, is to answer enigma, "How to live with the auto." Underpasses like this are one answer, which lets pedestrians, especially school children, cross under auto roads. Because of these 1-purpose roads, Radburn has one of the nation's best safety records.



Swimming pools are important part of Stein planning and a factor which he believes adds much community life. He recommends two pools, including one like this for smaller children with shallow depths for wading, water games. Benches allow parents to rest, sun, supervise activities.



Excellent planning has given Chatham Village international recognition. Air view above, shows how much of property is left to open parks and walkways. Amount of foliage has almost doubled since this photo was made. Project was sponsored by the Buhl Foundation, long known for its farsighted endowments.

CHATHAM VILLAGE, PITTSBURGH

Landscaping gives a unique character to these attached houses, demonstrates what "garden apartments" can look like. Catherine Bauer has called this "the best planned development in the country." Henry Wright worked with Stein on the planning. Houses were designed by Ingham & Boyd. Nineteen new units are being added this year.



Apartments at left have been almost 100% rented for 23 years, demonstrate that good land planning is good business. Units in these row houses now rent for \$74 to \$124 a month. Surrounding the 197 units is heavily wooded area. Of total of 46 acres, only 17 are used for houses.

GREENBELT, MD.

One of three Greenbelt towns built by the government, this is considered by many to be the best planned big public housing project in the US. Nearly 900 families moved in during 1937-38. In 1941 another 1,000 units were built for defense workers but original plan suggested by Stein was not followed. About 7,500 people live here now.



Large open areas surrounding the apartments and carefully preserved trees are characteristic of this project, 13 miles from downtown Washington. Despite lavish land use, private builders can learn much from the planning that went into it.

Shopping and community center, says Stein, was "most important forward step at Greenbelt." Here the modern market square was integrated into the plan, separating pedestrian from motorist—a Stein trademark.

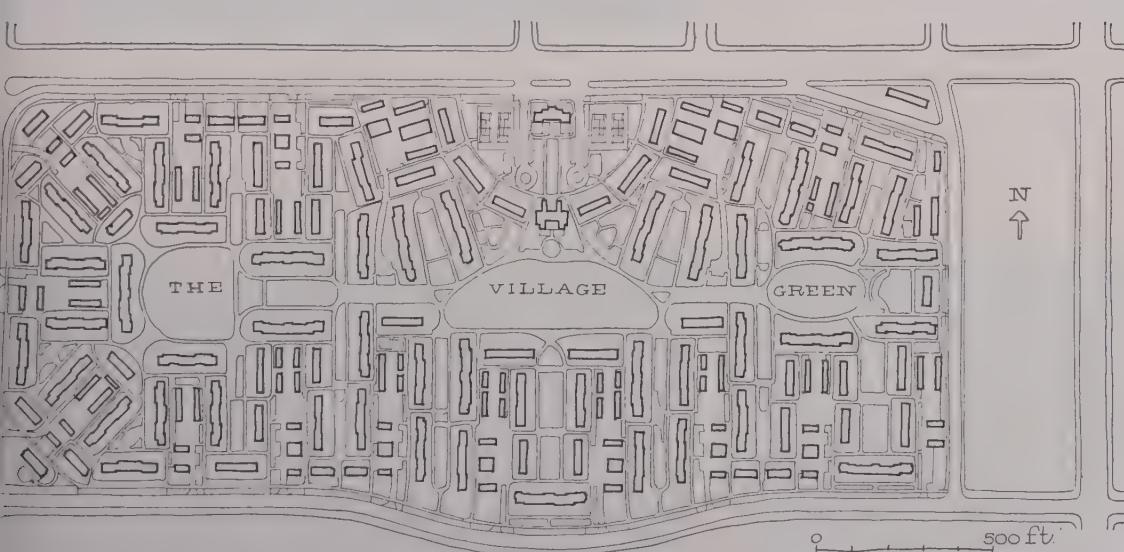
Tenants take pride in their homes, help reduce maintenance costs by taking care of their own hedges. Such activity helps carry out idea of a garden city. Below: inner walks separated from auto roads are safety feature.



Double crescent roads enclosed most of original Resettlement Development area, with two schools, community buildings and shops at center of inner loop. Stein was adviser to large group of government planners and his ideas were carried out here as well as in other Greenbelt towns.



Row houses provide 7.8 dwelling units per acre in contrast with 3.5 to 4 of typical 1-family house projects. Plan below shows entire 80-acre superblock where 627 families live.



BALDWIN HILLS VILLAGE, LOS ANGELES

"We think this is the best thing in the country," says an official of New England Mutual Life Insurance Co. of Boston who owns the project "it is always 100% rented."



Stein was adviser on plan; buildings were done by Lewis Wilson, Reginald Johnson, Robert Alexander. Says Lewis Mumford: "I know of no other recent community that lends itself so fully to strict scrutiny, simply because every aspect of its physical development has been thought through."

Here's how

TWO YOUNG ARCHITECTS specialize in BUILDERS' HOUSES

When you walk into the architectural office of Palmer & Krisel, you might even find a subcontractor in the reception room.

For these two young architects are deeply involved with their builder clients in every phase of home building.

Theirs is a closer-than-usual client and architect relationship; they are almost as absorbed in building houses as in designing them.

This concentration pays off in many ways. Latest pay-off came when Palmer & Krisel won two NAHB Awards of Merit. The houses which won the awards are typical of Palmer & Krisel's work: they are contemporary, livable, bristling with ideas. But more important to their builders, they are very salable houses.

Grossing \$423,000 in 1955, working with about 40 builders, Palmer & Krisel are tract-house "experts" who are still growing. On the next seven pages, you'll find some of their trade secrets . . .

Photos: (right) Joe Paul; (below) Douglas M. Simmonds



Interior shows how construction methods influence the design—roof is ceiling, walls are merely dividers.



Sliding walls open on fenced-in yard. Paved patio works as an outdoor extension of the living room.

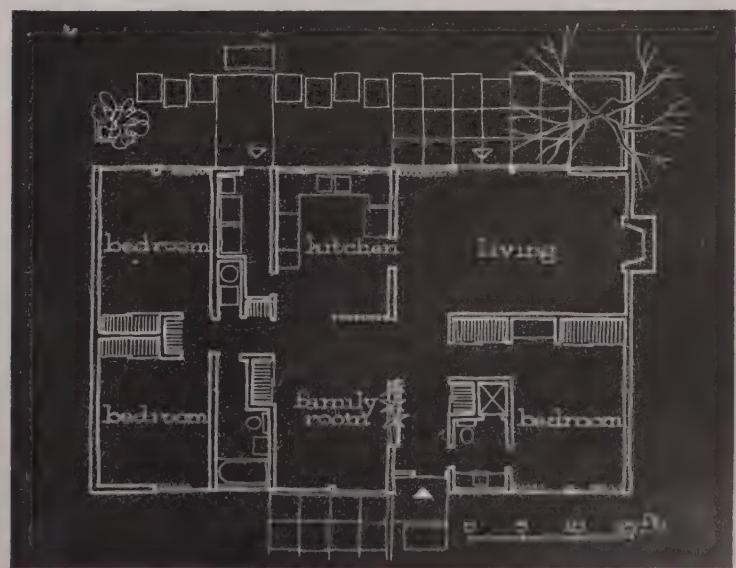




NAHB award house, built by Harlan Lee, has a patio in front protected by louvered fence. Garage is at rear.

Wood divider separates dining end of kitchen from family room without blocking openness of these rooms.

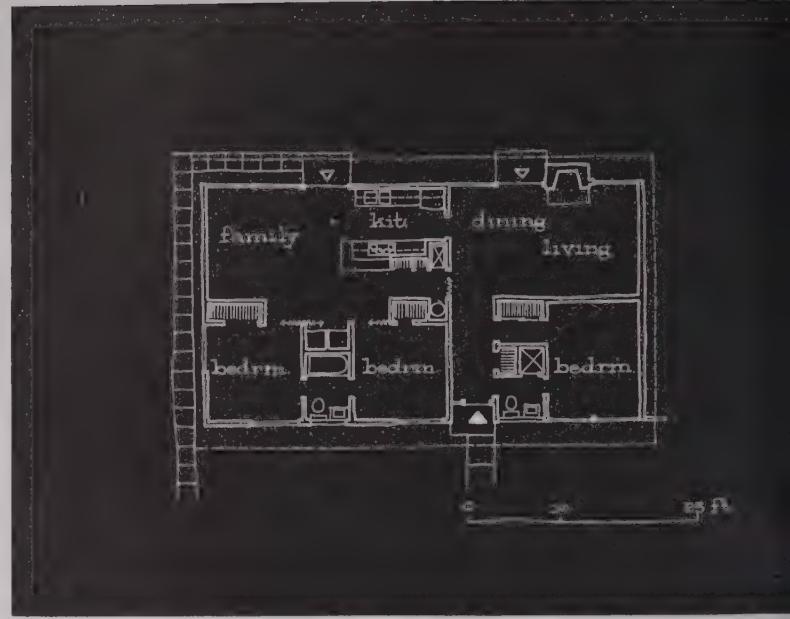
Plan shows several P&K trademarks: simple rectangle, three bedrooms, two baths, family room close to kitchen.



Photos: Julius Shulman



NAHB award house, second this year, was designed for Midland Properties



Rectangular plan has children's bedrooms handily adjacent to family room

This practical plan won firm a second NAHB award

Good design like this is the most important service an architect can give a builder.

But with good design as the basis of their service, Palmer & Krisel offer builder-clients optional "extras." They consult with FHA, VA, lending institutions, get city or county code okays, help evaluate bids, confer with job foremen, subcontractors, supervise model construc-

tion, decoration and photography. They supply landscape design and color plans, elevation changes, schedules, details, site plan.

Palmer & Krisel's builder client George Pas of Weber-Burns says: ". . . All our architects are involved in every phase of planning. . . . Our work takes an architect who has had experience working with builders."

Open kitchen is core of house, around which flow family, living rooms



Family room and kitchen split two informal eating areas





Exterior shows result of architects' work in its proportion, restraint, style. At \$16,800 in Parkwood it has finish of far costlier house

Warm, friendly exterior does a lot to sell this house

Straightforward plan is also used with alternate elevations



A really salable house earns money for both the architect and the builder. But Palmer & Krisel do not depend on royalties. They work on a fee basis, the fee depending on the size of the planned project. Here are typical Palmer & Krisel fees:

For a 25 house tract:	\$3,450
51	5,780
101	8,460
151	9,950
201	11,240
351	13,930
501	16,525

These fees are based on varying numbers of basic plans and elevations. For instance, the 25-house tract fee covers one floor plan with 2 elevations at \$750, four additional elevations at \$50 each and for each of 25 houses, \$100, or \$2,500, totaling \$3,450.

Palmer & Krisel estimate that an architect in this field can net 33 1/3% or better on his gross billing, depending on the efficiency of his operation and overhead.

To sell development, model exteriors need variety with harmony



Here, Palmer & Krisel used contrast of paned glass, solid wall



Stone creates dramatic effect when it doesn't fight other materials



Striated siding has texture interest; windows create a pattern



The architects like louvers, use them here for carport wall

One good tract house leads to another

Besides the profit one tract represents, it can also be a chance for future profit. For a satisfied builder is apt to come back when he buys a new tract.

For instance, a \$14,650 house designed for Corbin Palms sold so well (originally planned for 70 houses; 185 additional units built and sold) that builder George Alexander had Palmer & Krisel expand the basic plan to a 1,650 sq. ft., \$24,000 model for Eastwood Estates.

But this success is a two-edged sword. One of the fears a young architect might have about designing for tract builders is the possibility of being pigeon-holed as a "\$12,000-house man" or "a good split-level architect."

Clients like to repeat model that sells

Palmer & Krisel admit they still have a job persuading clients to experiment. When a model sells out quickly, the builder almost invariably wants to repeat it exactly in his next tract development.

"When we can't convince him to let us try something entirely new," says Dan Palmer, "we ask him to include at least ten or 12 houses of a new design among the others. Almost always these new ones sell out first, and on the next job he doesn't have to be coaxed to try something different. No matter how popular a single model may be, we do not think it is healthy for ourselves or for the industry to keep on reproducing the same house indefinitely."

Specializing in one-family homes has, of course, limited the scope of Palmer & Krisel's work. However, they have done some office buildings, collaborated on a hospital, remodeled the Sunset Tower. And they've just finished a \$250,000 apartment house project for Elwain Steinkamp in Bel Air. Sometimes a merchant builder retains them for a commercial job after he has originally worked with them on houses.

Practical experience is great asset

This narrowing of their field is balanced by the advantages of wide experience in one phase of architecture. They find specialization is a full time job. One of the reasons Palmer & Krisel talk builders' language is that they listen to builders at builder meetings and panels. They attend meetings regularly, feel it's part of their job to know what's going on in the builder field—both design wise and business wise.

They are members of the Young Builders Council and Home Builders Institute as well as being members of The Committee for the Home Building Industry of AIA.



Photos: (above) Joe Paul; (below) Julius Shulman

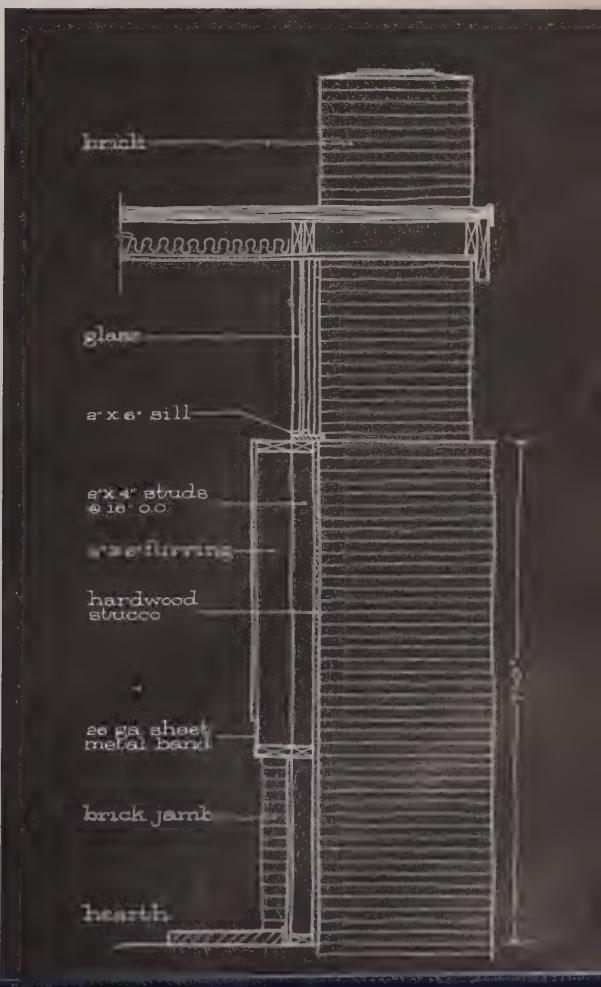
Glass gable pleases buyers, is a result of low, even plate line (6'-10½") which architects maintain in order to keep wall panels uniform and to use standard doors.

Glass gable ends are popular design feature



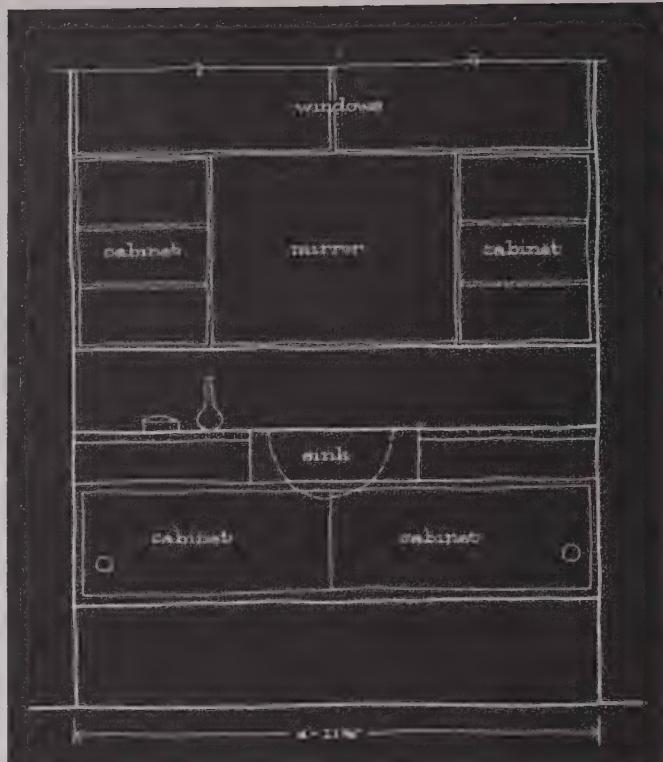
Chimney detail shows subtle method for joining chimney, glass gable. Fireplace is conventional because of FHA regulations; prefab would be less expensive.

Roof beam is not cut to fit house, but allowed to run to its full length. So overhang varies from house to house.

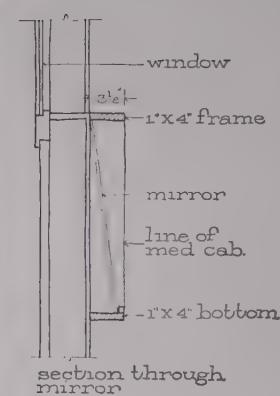




Under windows, Palmer & Krisel tilt a low mirror to make image visible.



Detail shows how tilt takes advantage of natural daylight. Cabinets hold cosmetics, medicine, replace conventional cabinet.



section through mirror

Buyers like custom-type details like these

Ideas make the difference between an exciting house and a run-of-the-mill one. So when an architect puts in ideas galore in a tract house, there is bound to be sales excitement, too. But it takes construction know-how to make sure the ideas don't run up labor costs. Here are ideas designed with production-line houses in mind.

A wall of closets is a find in a tract house. Closets are simple to construct.

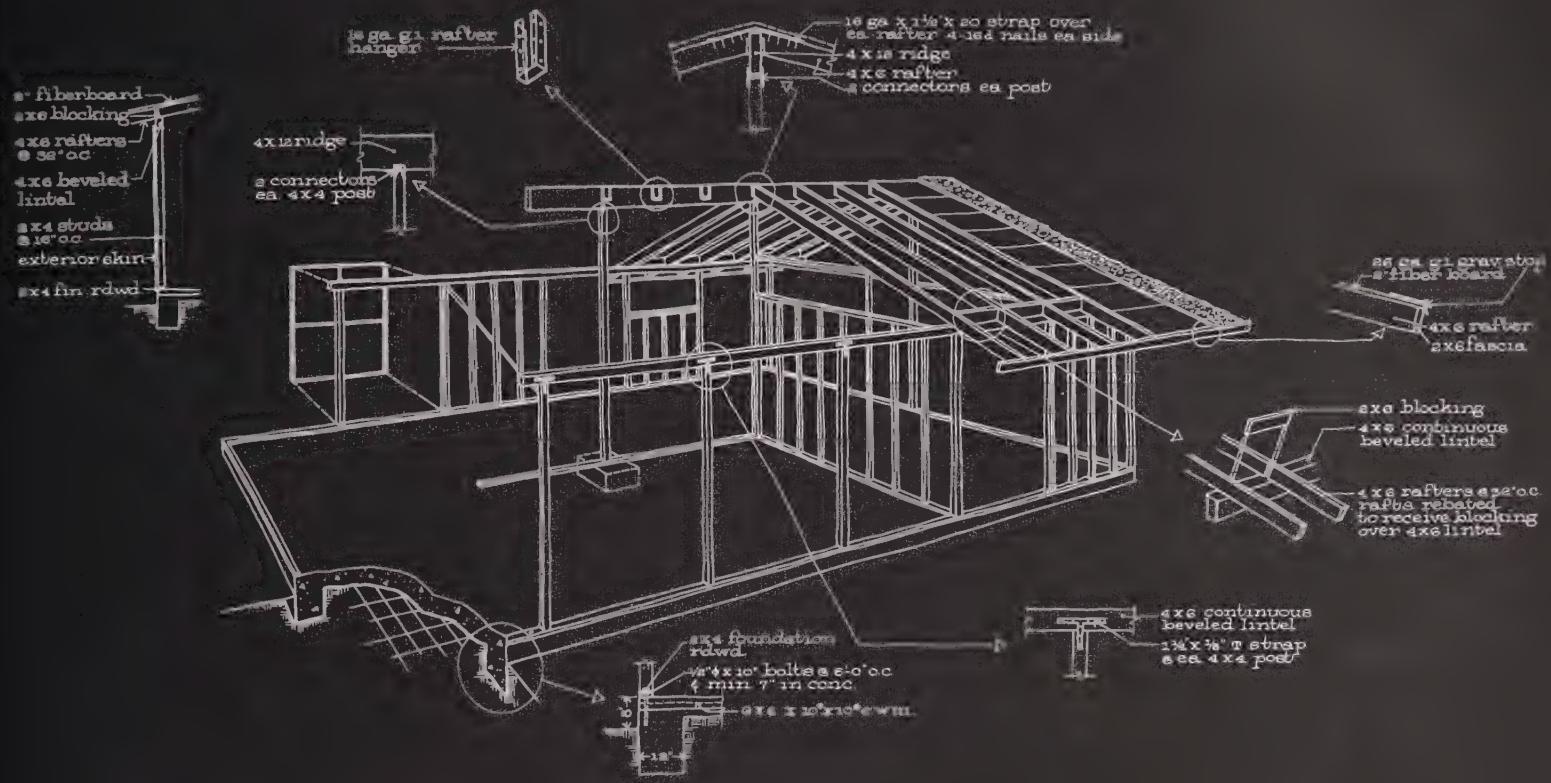


Wall cabinets in this kitchen were designed by Palmer & Krisel to assemble quickly. They are trim, can be finished in bright color.



Planter box in hall is popular divider





Sketch is a diagram of basic Palmer & Krisel construction. Carpentry is kept to a minimum. Conventional techniques are used where changeover would mean loss for builder.

Builders like construction shortcuts like these

These construction techniques are Palmer & Krisel trademarks:

1. Standard perimeter. One floor plan, with several elevations, means less work for the builder, economies in ordering.

2. Post and lintel construction.

3. 32" module. They use three window sizes in an entire tract. A minimum kitchen takes three modules, a minimum bedroom four.

This isn't a perfect answer—but they feel that trying to find the perfect module is like "trying to find a ruler that will measure everything."

4. Panelized walls.

5. Simplified roof.

6. Wiring and plumbing shortcuts. They try to be familiar enough with laborers' routines so that wiring and plumbing routes are kept to a minimum.

7. Reduced trim. The headers on doors are sacrificed to speed up production—as well as to fulfill contemporary design.

8. Economical cabinetwork. Kitchen cabinets, closets and so forth are designed by Palmer & Krisel to lighten work. But often, a subcontractor finds the new method time consuming because it is unfamiliar. In a case like this, Palmer & Krisel indicate conventional technique on working drawings. Each saving is examined and re-examined in the light of practical conditions.

Does working with Palmer & Krisel save builders money? In construction, yes—they estimate that where conventional construction costs \$7, their construction methods cost \$6. But rather than save on over-all cost, these architects add house-selling features.

(continued on p. 195)

J. Alpern



WHAT ARE TODAY'S MOST POPULAR FEATURES?

Basic research pinpoints and rates

41 ideas in 29 widely publicized promotional houses

What do buyers want in a house? Most builders have to guess or play their hunches, because there are no generally accepted, standard indices to measure the most popular design and sales features.

When Designer Henry Wright and Architect Betram Bassuk were commissioned to design an air conditioned house for nationwide promotion, the sponsors asked for more than just a design for cooling. They wanted the house to include as many popular ideas and features as possible but they left it up to Wright and Bassuk to find out what those features were.

To get the answer, the designers turned to consumer magazine houses and to leading builders' exhibit models. They felt these houses were trend setters for new innovations. Here they decided were to be found the planning ideas the public is familiar

with, the well-publicized features that have buyer acceptance and builder approval.

Wright and Bassuk analyzed the plans and specifications of 29 such houses, detail by detail, and tallied the score for each feature. They came up with a list of 41 ideas and from the number of times each idea was repeated in each of the houses, they got a clear picture of relative popularity.

One thing stood out: all of the 41 specific design ideas, sales features, and construction methods would work in any house. None were mutually incompatible (except a choice of roof types). More important, Wright and Bassuk found that some features, like three-plus bedrooms, are now almost a mandatory standard. Other ideas are more special, showed up in only one or two of the houses analyzed. (For comparative rankings see p. 204.)

How do you rate these ideas?

Here, in scrambled order, are the 41 items that Wright and Bassuk found in the 29 houses they analyzed. Rate them yourself and compare your opinion with the research results. Number the ideas in each of the three groups, putting them in the order of importance, as you judge it. Check your answers with the box score on page 204.

17 plan or layout features

	Three-plus bedrooms	—
	Two-car carport or garage	—
	Dead-end living room	—
	Hobby or work space	—
	Exterior basement stair	—
	Expandable plan	—
	Separate laundry utility area	—

Kitchen eating space

	More than one bedroom	—
	Patio	—

Side or rear living room

	Open kitchen	—
	Family room	—

Outdoor walls for privacy

	Central entrance	—
	Zoned layout	—
	Compartmented baths	—
	High-sill bedroom windows	—

13 tangible sales features

	Two-way fireplace	—
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Drawings: Fred Harsh



Advanced design for family living



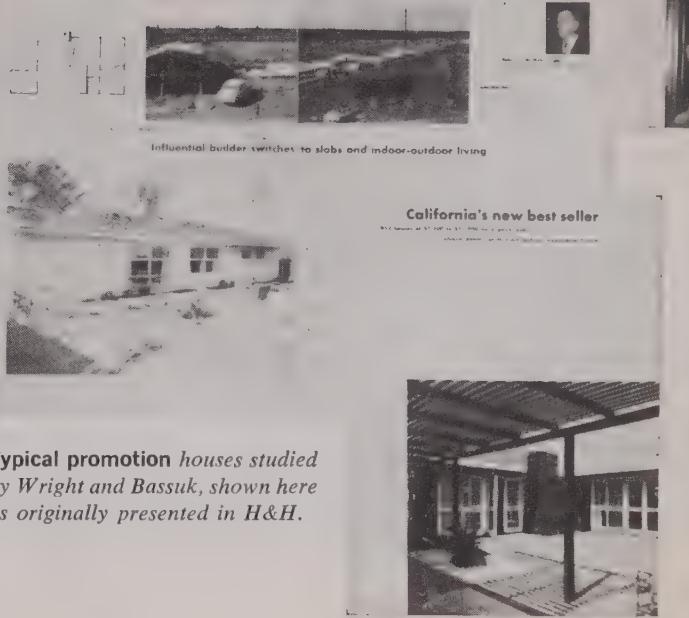
Home Trends

Research at the grass roots level

To cross-check their research findings against the opinions of working builders, the designers turned to another sampling. At January's NAHB convention, more than 40 builders were asked to rate the 41 ideas in the order of their market importance. Each of the men queried had previously indicated an interest in building the air conditioned promotion house.

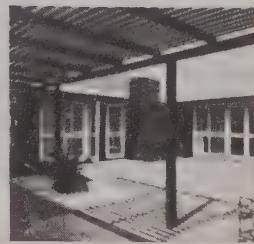
Wright and Bassuk found the builders' rankings agreed closely with the exhibit house ratings for the most (and the least) popular features. But between the two extremes, there was a wide range of opinion. You'll find the complete box score on p. 204.

For the new promotion house that this research helped to plan, see the following six pages.

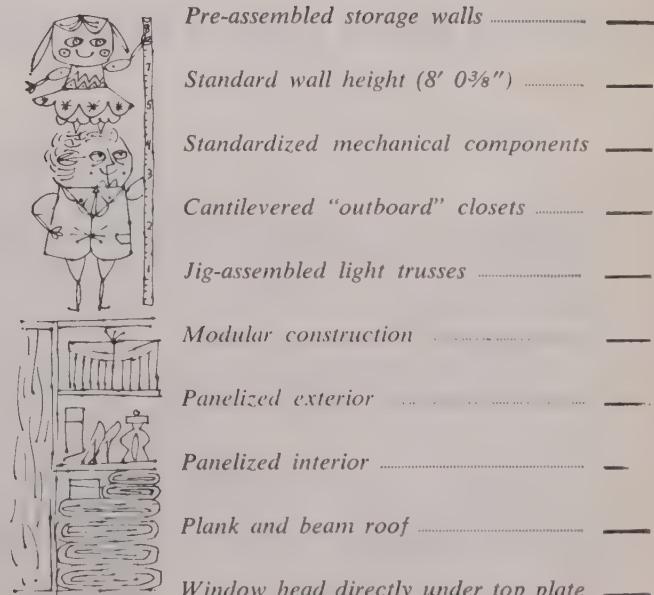


California's new best seller

Typical promotion houses studied by Wright and Bassuk, shown here as originally presented in H&H.



Barbecue facilities	—
Gable glazing	—
Master dressing room	—
Indoor dead storage	—
Outdoor storage	—
Storage walls	—
Sound conditioning	—
Inside exposed masonry	—
Built-in lighting	—
Cathedral ceilings	—
Built-in TV turntable	—
11 construction methods	—
Ventilating and fixed glass door frame	—



On page 204 you can compare your opinion against the rating by three important groups: consumer magazine houses, builders' exhibit houses, and a cross section of home builders.



This house was designed to show builders

HOW TO MAKE BUYERS DEMAND AIR CONDITIONING

The handsome house shown here is intended as a showcase to promote low-cost, year-round air conditioning.

Its sponsors asked Designer Henry Wright and Architect Burt Bassuk for an air-conditioned house with two big extras: top-flight design inside and out and built-in sales features that would find wide appeal and acceptance throughout the country.

Wright and Bassuk began with a basic plan of 1,460 sq. ft., added three alternate plans varying in size down to 1,220 sq. ft.

The plan is so flexible that you can site it with perfect orientation on any lot—a boon to development builders whose lots face every direction. (For details, see p. 186.)

It is so flexible that it can be built in any climate area of the US.

It is so flexible that it can change inside and out, as you

can see from the plans and exteriors on the opposite page.

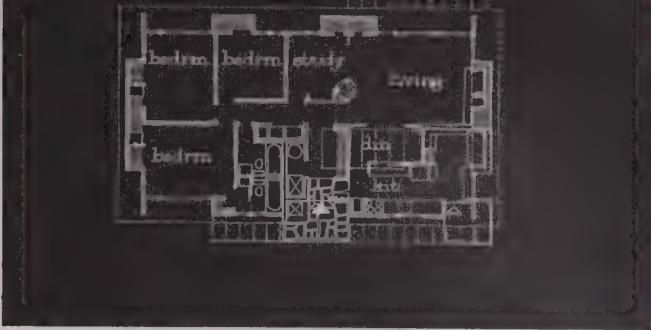
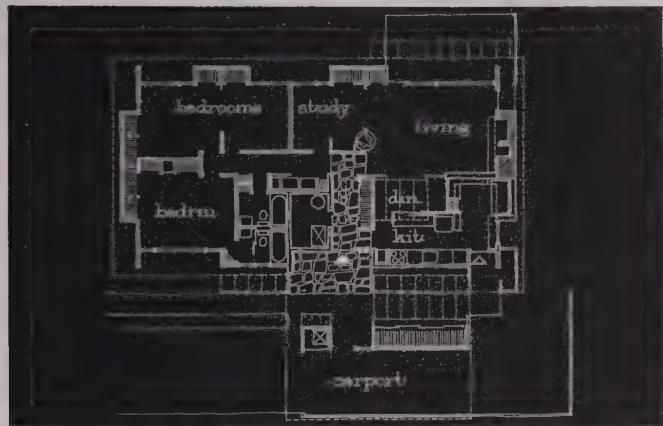
To build-in sales appeal, Wright and Bassuk culled good ideas from successful model homes and magazine promotion houses all over the country (for the ideas, see the preceding two pages).

To keep down costs, Wright and Bassuk developed some new techniques of their own and adopted other construction methods that have been tried and proven by successful builders all over the country.

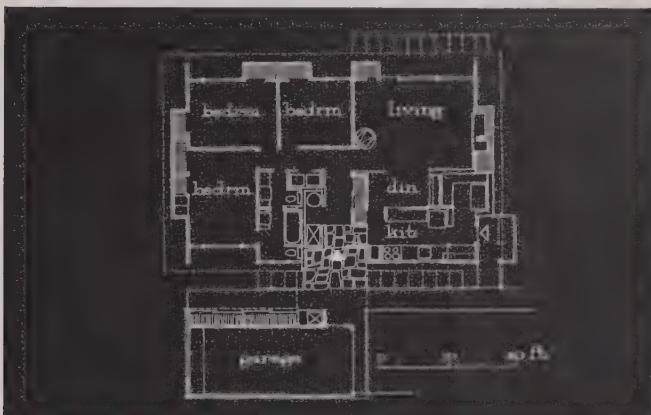
Because they drew from so wide a range of experience, so wide a range of popular features, so wide a range of methods, the sponsors, the Airtemp Division, Chrysler Corp. have named their model "The Composite House."

Its good looks, sales features and orientation adaptability—all present in an air conditioned house—will be promoted to builders on a nationwide basis.

**Size of basic plan can be varied
to meet different needs**



1,460 sq. ft. model (left) spreads over basic rectangle 52' long, 24' wide. Outboard storage closets are added around perimeter. Second version (above) spans 48' with same 24' width used in all models, totals 1,350 sq. ft. Smallest plan (below) has rectangle 44' long and is 1,220 sq. ft. Fourth model (not shown) offers 1,270 sq. ft. choice.



**These optional exteriors also fit
each version of basic plan**



Flexible design permits three optional exteriors in addition to model on opposite page. Each is planned for outdoor living with a patio at the rear. Either hip roof (above) or low pitch rafter design (left) can be used. House at left is basement model with garage and downstairs family room.

The "Composite House" can be oriented perfectly on any lot

If any one factor demands top priority for air conditioning it is orientation.

Face a house into the hot east or west sun and an oversized cooling unit will be needed to get rid of all the heat. Turn the same house to the north or south and you often need a unit only half as big. The cost comes down accordingly.

But what does a development builder do who has lots that face all directions?

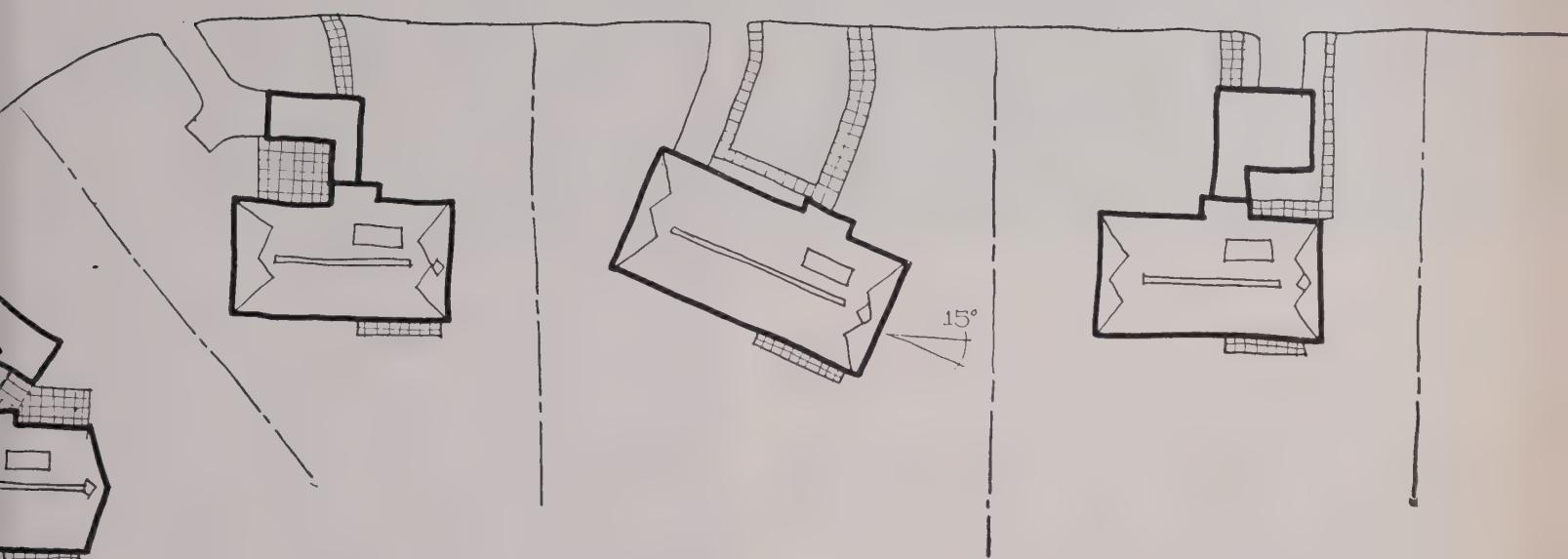
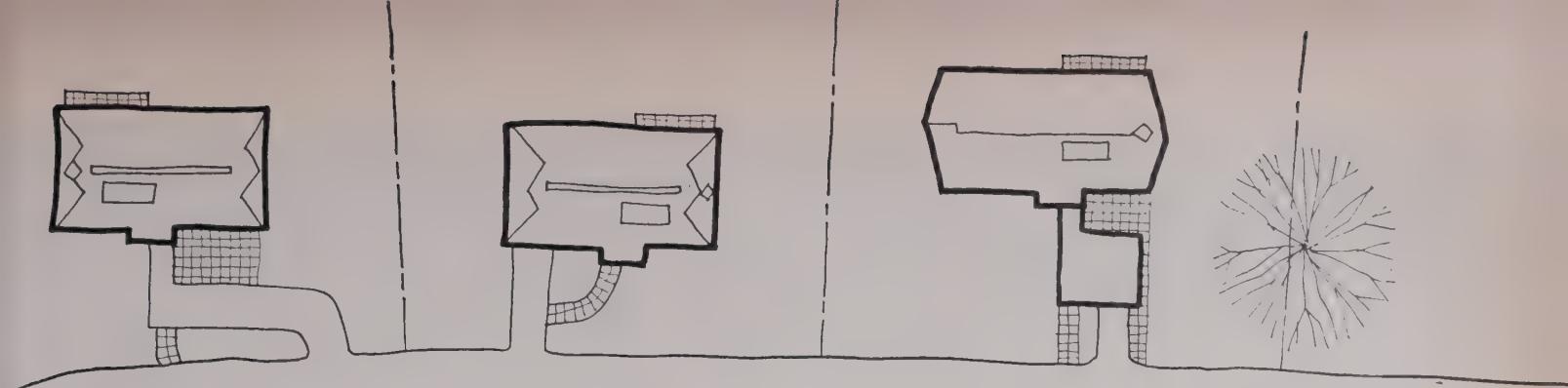
Designer Wright and Architect Bassuk, neatly solved the problem by planning the Composite House so its long dimension can always run east to west. Only the narrow, almost windowless ends of the house, face the hot morning and afternoon summer sun.

House is designed for sun control

The big windows are in the long walls which always face north or south. When they face south they are shielded from broiling noon sun by 48" overhangs. This built-in temperature control is designed to shield vulnerable glass from summer sun even when the house is turned as much as 15° from true east-west.

How these design features make perfect orientation possible on any lot is shown in this layout where the Composite House is sited on a variety of lots along a curving street. These lots illustrate virtually every orientation problem a builder is likely to encounter.





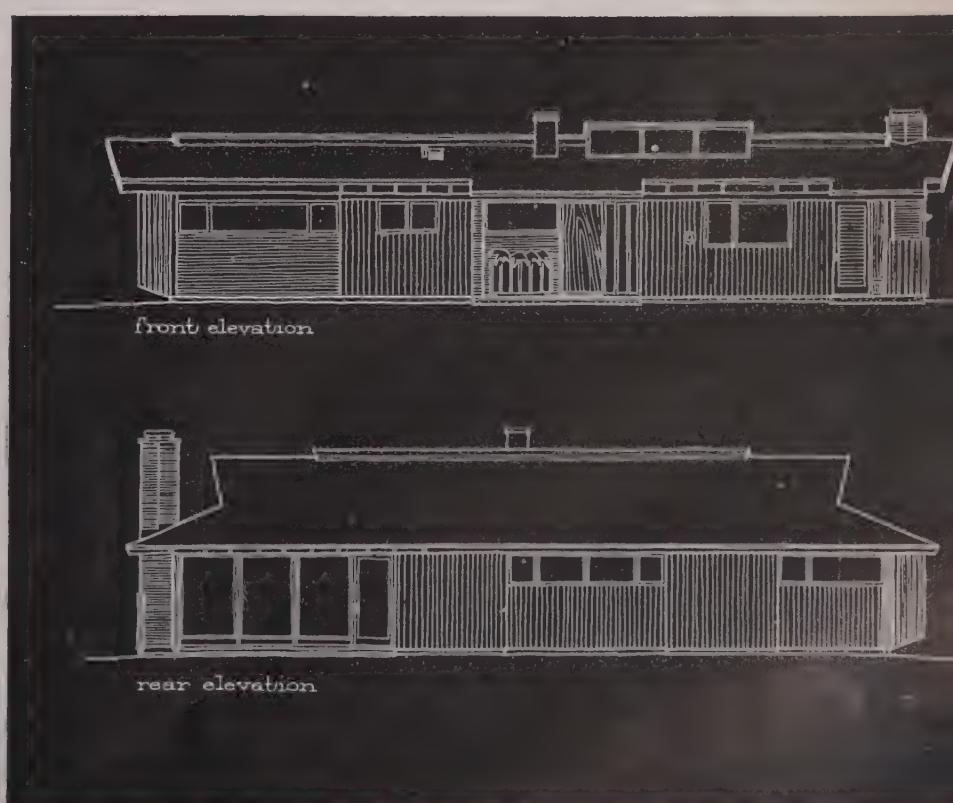
Key to the plan is the entrance door

The Composite House will work on any lot chiefly because the front entrance door is located at the center of one long side (see top elevation, right).

For lots facing north or south, the entrance is to the street. For those facing east or west, the entrance works just as well at the side. Alternate locations are provided for the carport or garage, depending on the lot.

The front elevation (at top) shows how the house looks with a low-pitched 2-in-12 rafter roof. The skylight always faces the front.

The rear elevation (bottom) shows the house with a 5-in-12 truss roof, hipped at the gable ends. The floor-to-ceiling windows are positioned to open-up the rear living area to the outside. Most of the other windows are placed rather high so they will receive maximum shading from the wide overhangs. Because the house is designed for year-round air conditioning the window locations are not arbitrarily fixed by the need for cross-ventilation.



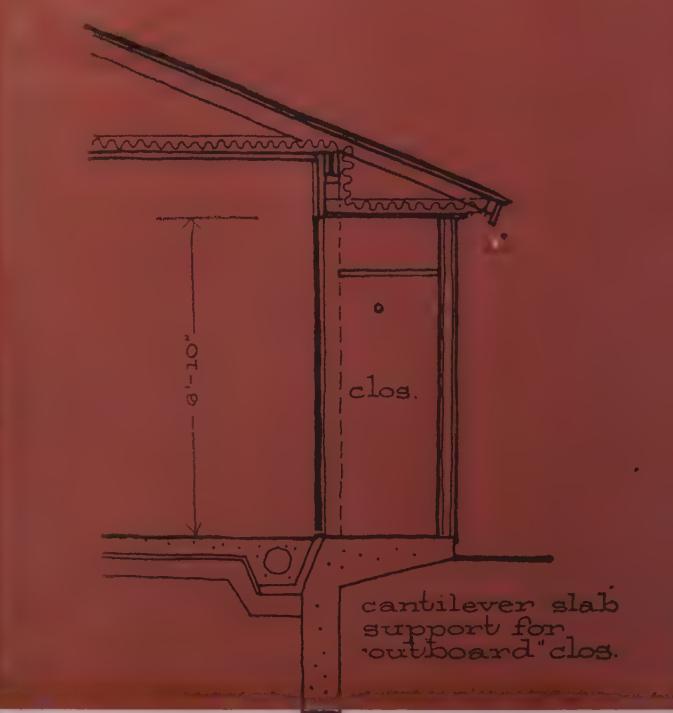
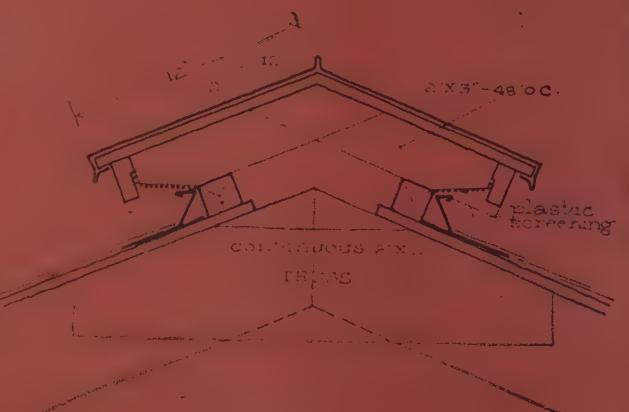
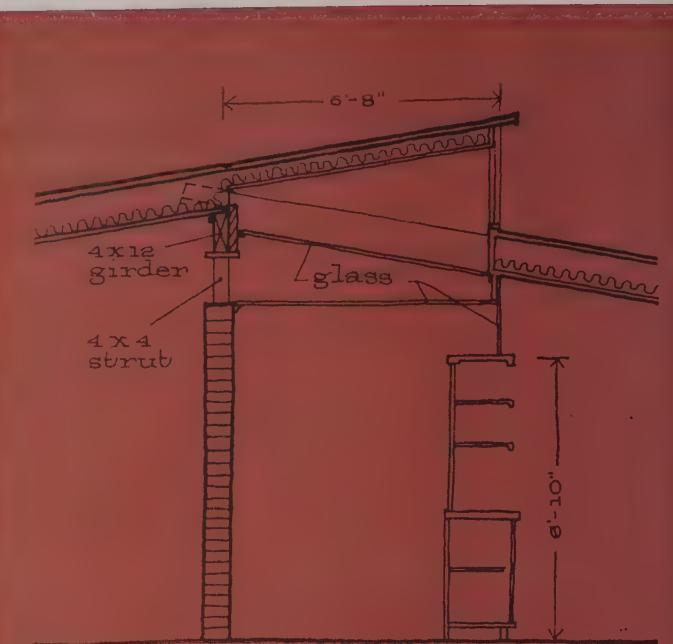
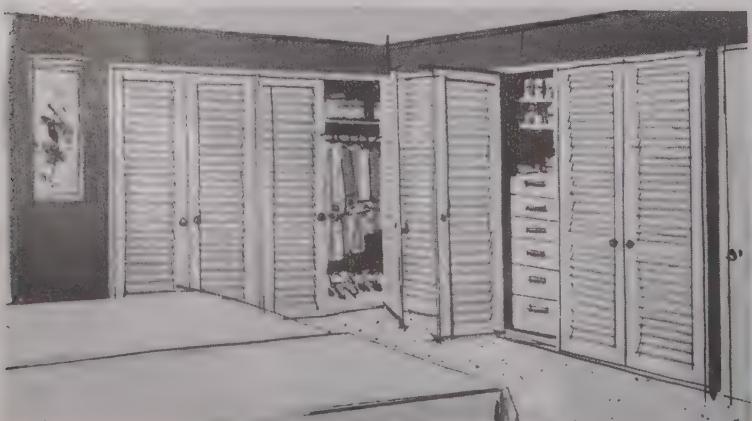


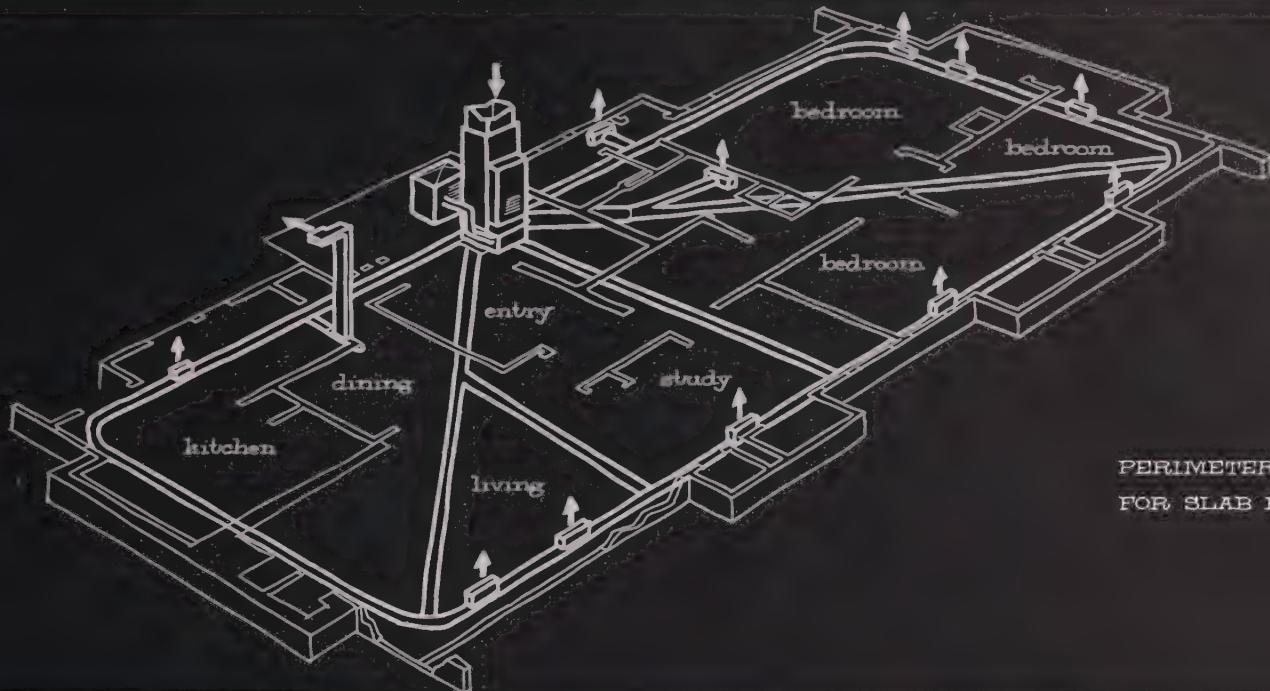
1. Sunproof skylight, built into sloped ceiling, is shielded from direct rays of hot summer sun by exterior eyebrow and side visors, detailed in drawing at right. But plenty of light is let in to brighten house interior. Low rays of warm winter sun can also enter. Skylight is centered directly over interior dining space.

**Three good ideas
add extra appeal
to Composite House**

2. Ridge vents, help cool the house by ventilating the roof—biggest single source of heat in any house. Vents let hot attic air escape, also provide ventilation urgently needed to prevent attic condensation in winter. (If ceiling is well insulated winter heat loss from vents is negligible.)

3. Outboard storage closets do not usurp high cost interior space, are cantilevered out from exterior walls but have interior accessibility. Closets are fabricated off-site, installed under overhangs on projections from main slab, are thus "roofed and floored at half price." Closets also serve to "insulate" large slice of outer walls from heat and cold.





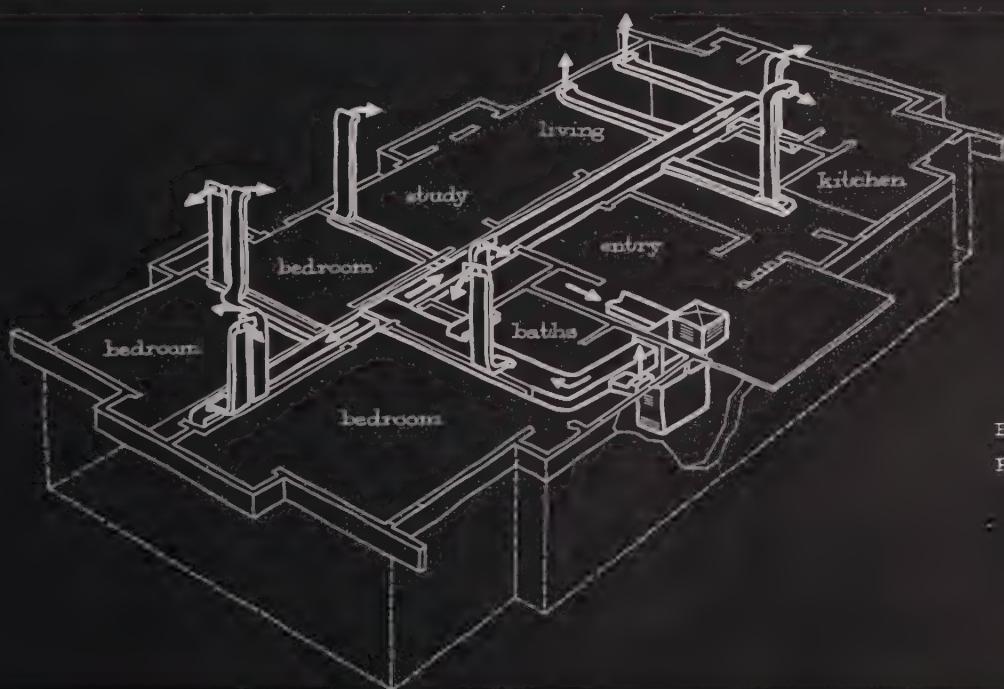
PERIMETER SYSTEM
FOR SLAB HOUSES

What kind of year round heating and cooling system will a manufacturer specify for his own house?

In effect, this is the assignment Airtemp engineers had in designing the air conditioning system for their Composite House. Moreover, the system had to be virtually foolproof to meet the varied needs of builders in every climate area.

Two basic system resulted. The one above was designed to heat and cool economically with slab construction. The drawing below shows the same equipment adapted to a basement house.

Because Wright and Bassuk designed the house so well for summer heat control, the amount of cooling capacity needed is "surprisingly low." In fact, any one of the Composite House plans can be air-conditioned with units half the size needed for many houses of similar floor area. The biggest Composite House (1,460 sq. ft.) needs only 2.2 tons of capacity. The others have lower cooling requirements, down to 1.7 tons for the smallest (1,220 sq. ft.). These figures are based on maintaining 75° indoors with 95° outdoors./END



EXTENDED PLENUM
FOR EASEMENT HOUSES



Circular door pull, designed by Paolo De Poli, carries the outlines of a smiling face floating airyly upon a background of several shades of enameled blue. Rim is outlined in bright copper.

IS THIS THE NEW LOOK FOR DOORKNOBS?

The fanciful faces, flying birds, paperweights and candy sticks on these pages are really part of a new collection of door hardware.

These pieces represent the work of a group of renowned sculptors and artists whose names—Lipchitz, Leger, Mirko, Spadini, De Poli—read like a vest pocket edition of the art world's *Who's Who*.

The collection is a bold step forward in the design of knobs, handles and escutcheons. It is a bold step forward, too, for its sponsor the Yale & Towne Mfg. Co. who commissioned the work. They wanted to give artists a free hand to create art and sculpture that could be turned

into interesting new hardware designs.

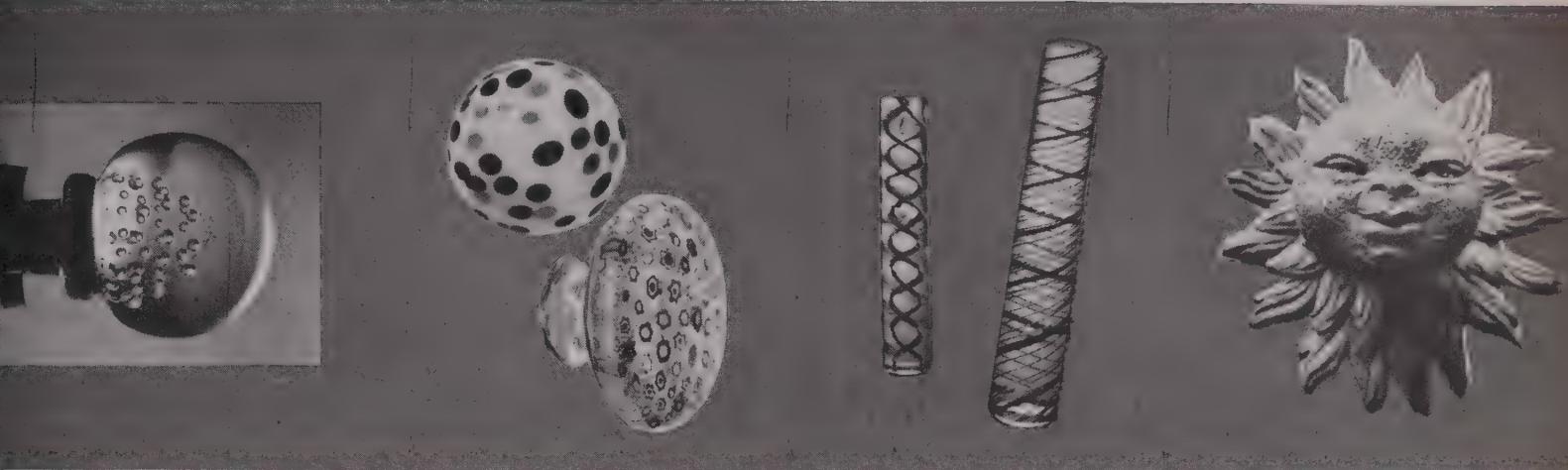
These pieces and others similar in concept are on exhibit May 1-5 at the Wildenstein Galleries in New York, will tour the country later this year. Purpose of the show is two-fold: to display the hardware itself and to find out what architects, builders and the public think about the new designs. On the basis of what they learn, Y&T will decide which designs to mass produce and which to handle as one-to-a-customer "specialties."

Architects and builders may well take note of the new hardware. The pieces evoke a wealth of ideas for custom houses and model home displays.



Flying-bird handle is by Italian sculptor Mirko.

Lever is hand-rubbed antique silver. Bird manages to convey a feeling of elegance and sprightly humor.



Crystal bubble knob was result of collaboration by the Corning Glass Co. and Y&T's Hardware Styling Dept. In it, a fountain of sparkling bubbles shoots up into the clear smooth ball of crystal.

Glass doorknobs designed by Venini of Venice. The first sprinkles Dalmatian-like spots of color on a milk-glass ball. The second, a rich millefleurs design, is like a Victorian paper weight.

Door pulls, by Venini, look like wisps of cotton candy caught in glass. Swirled lines of color—lavender, yellow, pink and blue—meander up and down the large cylinders of Venetian glass.

Cherub-faced sun shines as a knob by the Italian sculptor Spadini. Bas relief of face is set off against a rose molded into a sun burst. Knob, rose gleam richly in gold-plated bronze.

Ceramic knob and escutcheon by the late Fernand Leger put new color and form on a door. Bold geometric design is made bolder still by skillful use of brilliant orange, blue, black and white.

Nugget-shaped door knob plays up mass, texture. Knob is of crystal, aluminum, ceramic, gold or silver. It is particularly effective against a polished door. Design is by Van Day Truex.

Lever handle and rose in bronze are hand-rubbed to an antique finish. Surface effect is softened by flower-like design. Star flower knob has shape of a giant toadstool. Both designed by Mirko.

Full moon, like sun above, was created by Spadini. Droll child's face is antiqued silver, set off against a rose of scudding clouds intended to give one an impression of somnolent movement.



For New Products reviews, see p. 216

3 MORE WAYS TO BUILD BETTER FOR LESS

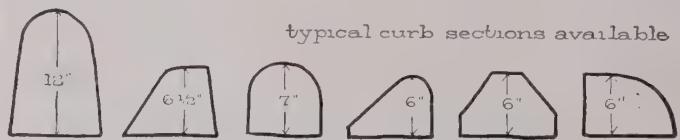
60

Formed curbing is squeezed out like toothpaste



Costs for curbs in Sampson-Miller's Garden City development were cut more than 50% through the use of an automatic curb machine. Rolling on angle iron tracks, the machine extrudes curbing as it moves along, at a rate as high as 2,800 lin. ft. per day (with a five man crew).

Blacktop (or concrete) is poured into a hopper and is extruded through a worm gear into the curb mold under high pressure. Compaction pressure causes the machine to move forward, making the curb a continuous ribbon. A tack coat of emulsified asphalt laid ahead of the machine bonds the curb to the paved area. Curb costs were cut from \$1 per ft. to 35¢ for straight runs and 50¢ on curves. A ton of blacktop yielded an average of 72 lin. ft. of curb.



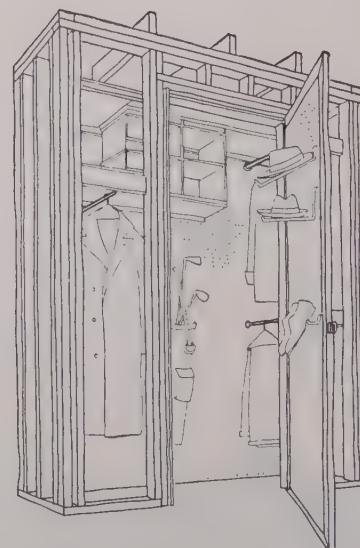
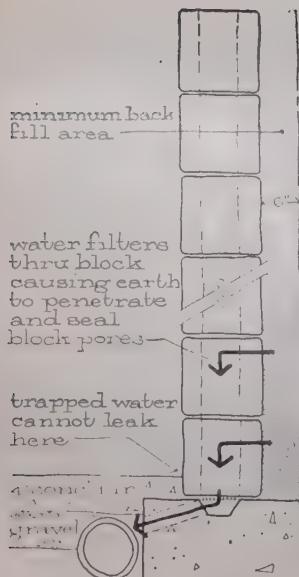
61 Foundation channel carries off water

Instead of sealing off ground water with an asphaltic coating on basement walls, Builder David Augustus, of Indianapolis, lets it penetrate his hollow block walls, then drains it off before it can leak into the basement itself.

A continuous channel is patterned into the footing with outlets sloping inward to a 4" drain tile laid around the interior perimeter of the wall. The drain, laid beneath the basement floor, leads to a sewer or sump pump.

Augustus found that water seeping into the block brings mud into the pores of the concrete block and in time effectively seals it off. To prevent careless masons from clogging the channel with mortar, Augustus uses strips of metal lath to catch any droppings.

Because backfilling is reduced to a minimum, and because he has not had a single wet basement since using the idea, Augustus figures his saving at \$150-\$250 per house.



62 Closet planned for efficient use

From the Masonite Corp. comes a closet planned for the builder's house, where every inch of storage space is vital. Chief aid to efficient use of the space is the location of hanger rods. Two are mounted, one above another, to accommodate short items (suit coats, skirts, trousers, etc.), on one side of the door opening. Opposite, another rod is hung shoulder high to hold coats and long dresses.

Instead of plain shelving, a pigeonholed divider made of $1/4$ " hardboard is mounted on the back wall to hold purses, hats, and other small items. Both wall and door back are surfaced with perforated hardboard. A wide variety of closet hardware may be used to provide for special items./END

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to your homes !**

Your new homes will sell much easier and faster with brand-new RCA WHIRLPOOL gas and electric built-in ranges. What woman can resist them! For new RCA WHIRLPOOL built-ins have all the modern beauty and cooking conveniences women want. There's a giant-size oven with automatic clock control . . . automatic appliance outlet . . . full-view door window . . . smokeless broiler . . . eye-level controls . . . plus convenient interior floodlight. You can select from both four and two burner cooking tops . . . plus finishes in white porcelain, stainless steel and copper (on some models) to fit any decor.

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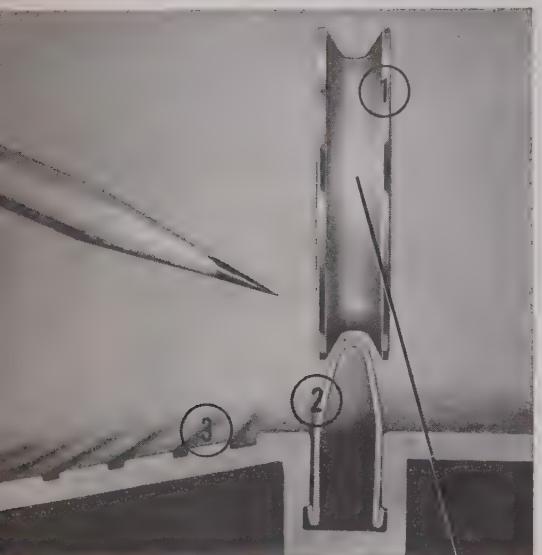
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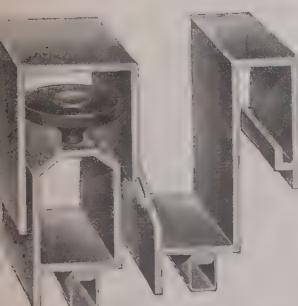
How easy can a sliding glass door operate?

test proves 1 lb. pressure moves Ador unit



Secret of easy door operation is found in this cross-section view. Hard brass sheaves (1) are full 1 1/4" o.d., and can carry loads far in excess of sliding glass door requirements. Raised, stainless steel track (2) is completely above surface. Sloping threshold (3) prevents collection of dirt or water.

Stainless steel ball bearings are lifetime lubricated and incorporate a special 3-step design to permanently seal the unit from entry of dirt or moisture.



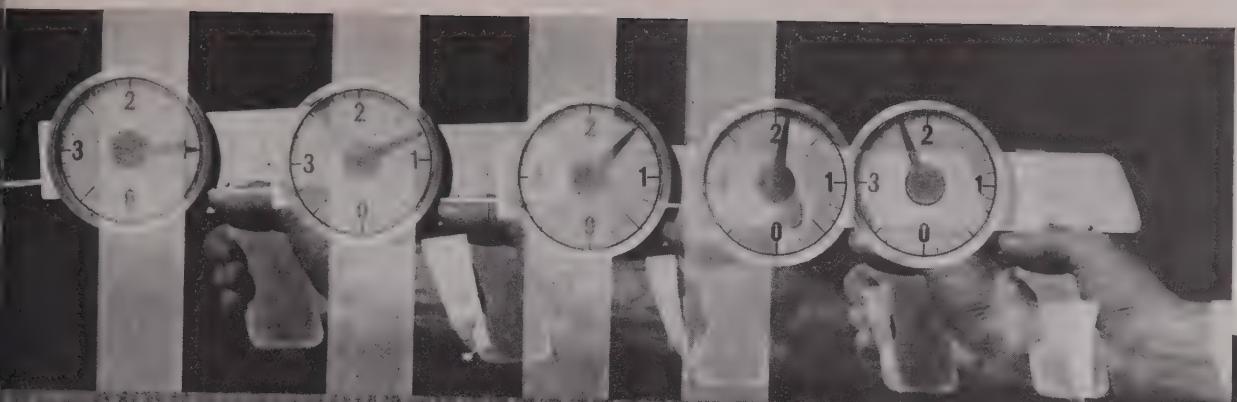
Header detail shows top of vent with neoprene centering roller mounted in Oilite bearing. An exclusive Ador design feature, this positively assures accurate alignment of vent with frame.

Ador

America's foremost all-aluminum sliding glass door



Forty feet long and eight feet high. The Ador structural design provides a perfectly straight frame —making practical even extreme door widths. Large doors such as this one glide as easily as standard 6 feet or 8 feet Ador units.



Dramatic test of Ador door movement is graphically recorded in this series of stop-motion photographs. Note that the test meter shows pressure as slight as 1 lb. operates the sliding vent.



175 MORE Admiral Homes

in Southington, Connecticut

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says J. R. Cochran

THE MEADOWOOD CORPORATION

MEADOWOOD

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SOUTHINGTON, CONN.

Mr. Frank A. Baldus
President, Admiral Homes, Inc.
300 Mt. Lebanon Boulevard
Pittsburgh 34, Pennsylvania

Dear Frank:

As you know, a developer seeks homes which will enable him to enjoy fast sales.

Before settling on one line of homes, we investigated eight or nine lines. Of them all, Admiral Homes promised us most in beauty, flexibility, precision construction, plus speed in completion.

Our experience in the "Meadowood" development home was delivered this week, so we know what we're talking about.

After careful study and experience with other manufacturers of prefabricated homes, our experience with Admiral has been such we would be glad to recommend your homes with enthusiasm.

Sincerely,

J. R. Cochran
J. R. Cochran

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Locust 3-0090



As examples of the money-saving features of contemporary construction, Palmer & Krisel point to Weber-Burns, who put up their first 30 homes in Pomona at the unit price the architects estimated for 271 houses.

Subcontractors are a vital factor in money-saving techniques, one reason why Palmer & Krisel keep close tabs on them. Subs seldom lower a bid once it has proved acceptable on a previous job. But Palmer & Krisel are frequently able to secure a revision of original bids by showing a sub how he will be able to do his job more easily and quickly. Quickest way to convince subcontractor is to have him do the model on a time and material basis.

Architects control design

In working with builders, Palmer & Krisel have been uncompromising in only one thing: they design *only* contemporary houses.

They worked for \$5 an hour on their first development-builder job to get a chance to do a contemporary house. Because this first design sold well, the sacrifice paid off, because it freed them to design the kind of houses they like.

It's easier, these days, to sell builders on design than it was when Palmer & Krisel started out five years ago.

Public influences design

In most of Palmer & Krisel's houses there are no gimmicks, no ornament for ornament's sake. Partly, this is a result of their good sense, but it is also due to the shopper's market which Los Angeles (along with many other areas) is experiencing. When people shop around, it takes more to make them stop and buy. So builders as well as architects are interested in adding quality to their houses, features like family rooms, built-ins, terraces.

Take a builder like Ray Miller of the Howard S. Miller Co., who says, "We definitely feel that architects are practical. In this day and age you can't do without them. It only is necessary to look at the finished product of good architecture and the average pre-architect era tract house and one can judge for oneself."

Naturally, it's easy for architects to cooperate with builders when this kind of understanding exists.

Besides producing a salable house, Dan Palmer adds, "We have got to save him money, either by using less material, less labor or less time."

As further proof that the builders are becoming more aware of the im-

continued on p. 198



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about a new Kno-Draft RESIDENTIAL Air Diffuser

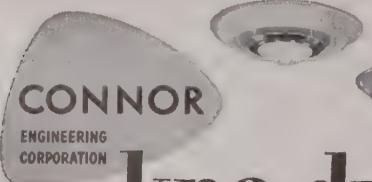
Now, with the new Type KH-D, you have a Kno-Draft Air Diffuser with *built-in damper*—especially designed for residential installation. This means precise, easy adjustment for perfect comfort.

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portance of good design, some of them are adding experts to their own staff.

Al Lushing of Midland Properties (NAHB winner) says, "We now have our own planning department which basically helps in developing our ideas and in handling research into what the public wants. This helps us work more intelligently with our architects, as we can express our own thoughts to them in better fashion. We have learned a great deal in working with architects and now feel we have reached the point of real architect-builder collaboration. This, in the end, gives the home buyer a better home value."

Builder-architect cooperation takes many forms. For instance: when the builder can't meet Palmer & Krisel's recommended construction price he almost invariably comes back to them. The architects call in the sub to discuss construction techniques and possible adjustment. They find their cost estimates are consistently accurate within 10¢ a ft.

Builders know production

Palmer & Krisel have this word of advice for young architects. "You may go to work for a builder who is not as receptive as you are to new ideas. Remember, he's in this business for profit. If he doesn't want a butterfly roof it's not because he's an esthetic aborigine but because he's afraid the public won't buy it."

Besides talking to the builder, Palmer & Krisel find it helpful to talk to the tract superintendent. They say that an architect is under no compulsion to accept his advice but properly evaluated, it may help to do a better job. This might also be said about all the people involved in a tract job.

"That bright idea you have for saving materials may prove disastrously expensive when the final labor costs are added up. Or maybe you know how to cut down on labor only to discover, too late, that you can't always teach an old carpenter new tricks."

Such cautions are worth noting in light of these comments from builders:

"I feel that architects are actually not close enough either to the builder or the buyer to be a real asset."

"Architects make pretty pictures, but they don't always come out that way when translated to wood and plaster . . . they lack construction experience."

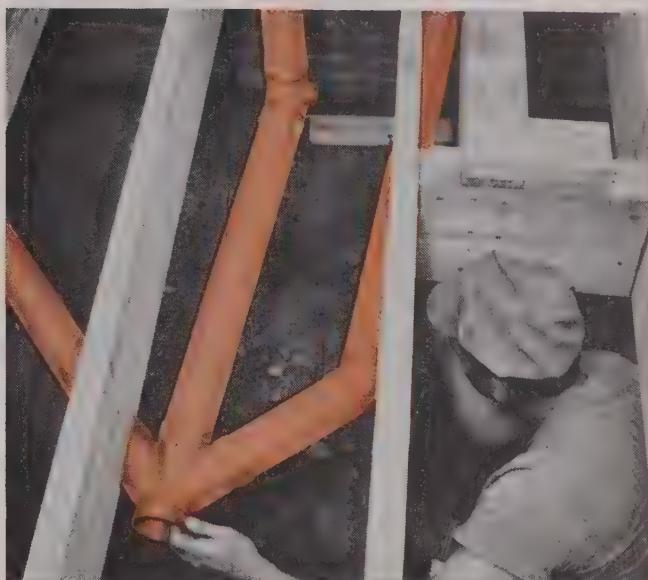
"Some architects could benefit from a closer collaboration with the builder before the plans are finished, thus cutting down on changes."

continued on p. 200

A Leading Tennessee Master Plumber reports Copper Tubes Cut Installation Time Over 50%



Light Weight—“The light weight of copper tube and fittings makes installation easier and faster—makes possible prefabricated sections like this, for example.”



Save Space—“Preassembled sections are connected easily. Stacks with fittings were installed in standard width partitions—gave me an extra 10 square feet of useable floor space.”



Prefabrication—“This double-Y and other sections can be preassembled out in the open or at the shop where men can work easier and faster—no lost time waiting for construction.”



Easy to Handle—“The light weight of copper tube and fittings makes installation easy and fast even in cramped working areas. Our men like to work with copper.”



When Harold E. Orr, president of Leopold & Orr, Knoxville, Tenn., built his new home recently, he installed an Anaconda all-copper drainage system. Mr. Orr, who is also a vice-president of the Associated Plumbing, Heating & Mechanical Contractors of Tennessee, Inc., reports that installation time was cut more than 50 per cent. His explanations for the saving are quoted under the photos.

For complete information, write for our free booklet, “Copper Tubes for Sanitary Drainage Systems.” Address: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

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Available through plumbing wholesalers

FHA/VA are factors

Working on plans with FHA and VA can be rewarding as well as time-consuming. Palmer & Krisel designed the first "no-no-down" VA-financed tract in Los Angeles County. They check preliminaries with FHA, so they don't go too far before changes can be made to conform with FHA regulations. They invite FHA inspectors to go through their houses, in order that they may become familiar with their kind of contemporary construction.

"Research" is part of job

It isn't usual for an architect to spend Sundays "house hunting" but that's what Dan Palmer & Bill Krisel do many a week end. For they find that by touring subdivisions and talking to house shoppers they learn a lot about what people like and don't like about houses. Sometimes they find out about their own designs; other times they "comparison shop" other houses.

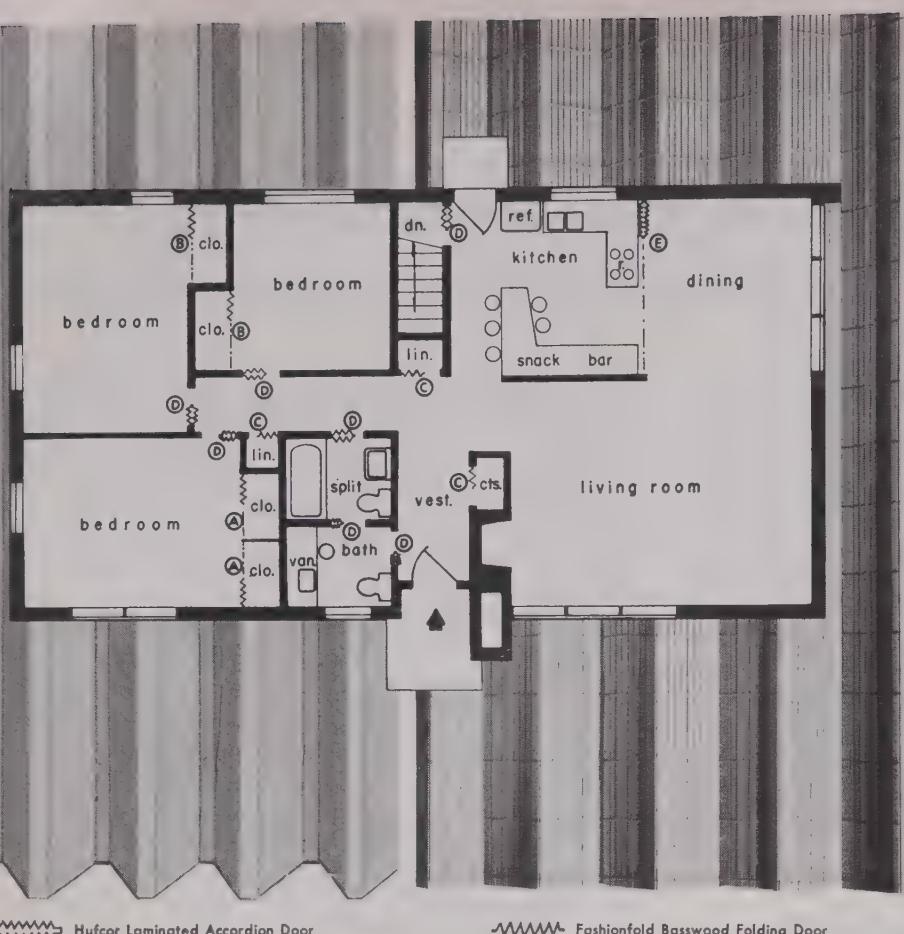
One reason they enjoy specializing in tract-house building is that they understand the builder and his problems. They advise young architects: "Don't sell the builder short. He is your partner, not your opponent, and deserves your respect for his ability in his own field. Listen to him with an open mind and try to understand his problems. You can be as firm as you like about design but when it comes to construction techniques what you can learn from him will often make the difference between success and failure of the job."

Builders benefit, too

It is worth noting that this fair-minded approach is echoed by some of Palmer & Krisel's clients. For instance, George Pas of Weber-Burns says, "Working with architects is the only way to build. In our price range (\$12,000-\$15,000) we would not be able to develop the proper merchandising appeal without an architect, an architect who has had the experience of working with builders and their problems."

John Secrest and Harold Fish of Viewcrest Homes put it this way, "This question of team operation works both ways. The work of the architectural firm is complemented by the efficiency of the builder, and the efficient and thoughtful builder needs the services of qualified architects who have specialized in building subdivision homes."

That describes Palmer & Krisel—to a T. Here are two young men who know where they've been, and what they're doing. They are specializing in builder houses—and liking it.



Hufcor Laminated Accordion Door

Fashionfold Basswood Folding Door

How to Save Over \$200 per House

New Hough Door Construction System Saves and Sells

Actual on-the-job cost comparisons including paint, trim, labor, etc. prove that you can save hundreds of dollars with the Hough Door Construction System. The secret: using both Hufcor and Ra-Tox Fashionfold doors instead of space-consuming swinging and sliding doors. The floor plan above is an actual illustration of the system. Seven Hufcor doors, one Hufcor room

divider and seven Fashionfold doors were used for a net saving of \$323.79. Find out now how this system works. Ask the Hough distributor in your area to help you make a cost analysis of your own floor plans, or—

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Hufcor accordion doors with 5-ply semi-rigid laminated covers are built on the vertical pantograph principle. Designed to assure more sound reduction, these doors also have a trim-line architectural beauty and an inborn toughness that makes them the ideal folding wall or closure for kitchen, bedroom, bathroom and other openings.

Ra-Tox Fashionfold basswood slat doors are distinctively designed to add "plusses" to the decor of your homes. They save wall and floor space, provide full accessibility, provide needed closet ventilation, are easy to operate and withstand tremendous amount of abuse. Ideal for closets, utility areas, room dividers.

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950 CFM FREE AIR

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Send coupon on opposite page for complete specifications!

What are the most popular features in today's house?
(continued from p. 183)

Here's how 29 promotion houses utilized 41 planning, sales and construction ideas—and how a sampling of builders rate the appeal of each idea. (From the Wright and Bassuk report.)

Consumer magazine houses

BH&G Five Star House, Arch't. G. B. Steinberg
BH&G Five Star House, Designer Alfred Levitt
BH&G Five Star House, Designers B. Duenke, R. Fournier
BH&G Five Star House, Arch't. H. T. Fisher Assoc.
BH&G Five Star House, Arch't. D. F. Rixman
Home For All America, Arch't. Robt. A. Little
Modified version of HFAA, Builder Joseph Peltz
BH&G Idea Home (1955)

Woman's Home Companion Home, Arch't. Geo. Nememy
House Beautiful Pacemaker, Arch't. Harwell Harris
Parents House, Arch't. R. W. Clemens, C. B. Wilson

Plan or layout features

Three-plus bedrooms	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Two-car carport or garage	X																												
Dead-end living room	X	X																											
Hobby or work space																													
Exterior basement stair																													
Expandable plan																													
Separate laundry/utility area	X		X																										
Kitchen eating space	X	X	X																										
More than one bathroom	X																												
Patio	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Side or rear living room	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Open kitchen		X																											
Family room																													
Outdoor walls for privacy	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Central entrance	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Zoned layout																													
Compartmented baths	X																												

Tangible sales features

High-sill bedroom windows		X			X	X																							
Two-way fireplace		X																											
Barbecue facilities																													
Gable glazing							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Master dressing room																													
Indoor dead storage							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Outdoor storage							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Storage walls							X																						
Sound conditioning																													
Inside exposed masonry		X																											
Built-in lighting																													
Cathedral ceilings							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Built-in TV turntable																													

Construction methods

Window walls		X	X																									
Pre-assembled storage walls			X																									
Standard wall height (8'3/8")			X	X																								
Standardized mechanical components																												
Cantilevered "outboard" closets																												
Jig-assembled light trusses																												
Modular construction																												
Panelized exterior		X	X																									
Panelized interior																												
Plank and beam roof		X																										
Window head directly under top plate		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Sampling of builders

Builders' exhibit houses

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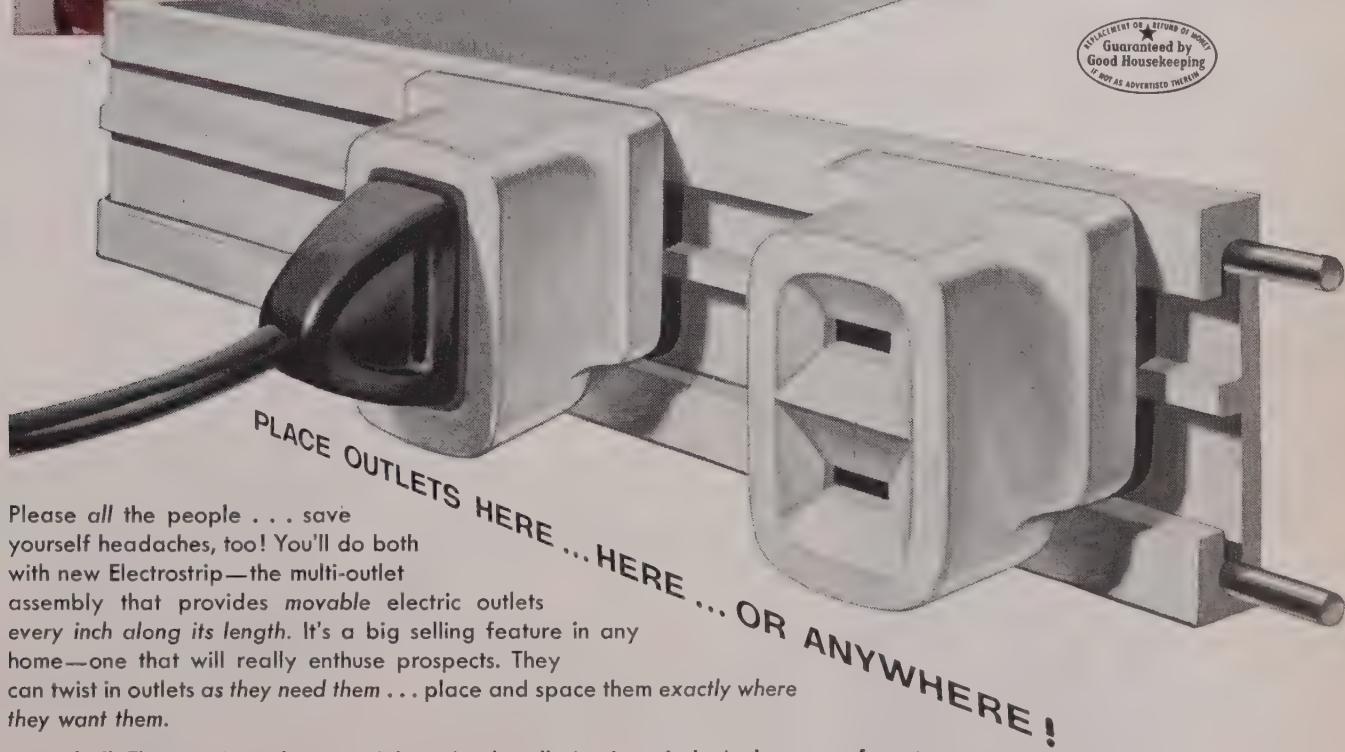
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Best of all, Electrostrip makes your job easier. Installation is a cinch. And you can forget
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New wood flooring cuts cost, saves time

Scientists develop low cost veneer floor and parquet blocks that can be laid directly over a concrete slab

After six years of research, scientists at the US Forest Products Laboratory have developed two important new kinds of low cost wood flooring:

1. Veneer flooring that can be laid directly over a concrete slab or plywood subfloor to give a handsome wood floor at a price competitive with inexpensive floor tiles now on the market.
2. Low cost parquet flooring blocks that can also be speedily laid over a concrete slab or plywood subfloor.

The two new flooring products are the outcome of research underway since 1950 when HHFA handed FPL* the problem of finding "suitable flooring materials for low cost houses." Just as pressing then as now was the need for an inexpensive way to meet the demand of many homebuyers who want wood floors in slab-on-grade houses.

* Forest Products Laboratory is a federal government research organization which operates under the Department of Agriculture's Forest Service.

Wood skin for concrete. The veneer flooring comes in strips that are laid on a slab as easily as tile. An adhesive is used and nailing is eliminated. Also eliminated is the need for screeds.

Previous tries to develop veneer flooring failed because of shrinkage and swelling. The FPL staff licked these problems by devising a special drying process for the new veneer and then installing it with a rubber-base adhesive (instead of the asphalt-base type commonly used for flooring).

The veneer gives a handsome appearance and you have to look closely to tell it from expensive hardwood. The new veneer is not yet in commercial production, but FPL Engineer Bruce G. Heebink says: "It should be competitive in price with all but the cheapest asphalt tile."

Low cost parquet. Like the veneer flooring, the newly developed parquet floor blocks should be inexpensive to manufacture. The new blocks require only low-quality hardwood and could use the lumber industry's "shorts". (The current popularity of hardwood blocks has led some producers to cut up regular hardwood flooring to make them.)

Conventional blocks are manufactured by tongue-and-grooving each individual piece and then stapling or nailing a metal spline to the pieces for binding support. This is a time-consuming assembly job, and moreover, the tongue-and-grooving wastes a $\frac{1}{4}$ " of each individual piece.

The new blocks are made faster and easier and take advantage of wood's natural tendency to swell as it absorbs moisture from the air. The individual pieces are merely ripped on a saw with the edges left unplaned. Tongue-and-grooving is eliminated.

The six or seven individual pieces for each block are pressed in a jig and held together with a hardwood spline driven into what will be the underside of the block. The spline has been previously dried completely free of moisture. As the spline picks up new air moisture, it swells and holds the block rigidly together. The result is a 9" square block with the handsome appearance shown at left.

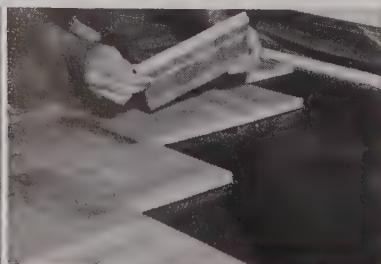
Like the new veneer flooring, the parquet blocks are not yet being produced commercially. Chief reason is that conservative FPL scientists wanted time-consuming tests completed before okaying the new floor products for production.

continued on p. 210



Test floor with new wood veneer flooring strips shows little wear after hard use. Strips are 4" wide, $\frac{1}{8}$ " thick, can be installed directly on slab or plywood subfloor. Photo (above) shows individual strips ready for installation.

Similar flooring (left) is $\frac{3}{4}$ " thick, can be made from the new veneer by glueing it to strips of $\frac{5}{8}$ " thick wood backing, saw-kerned for flexibility. Called "Flex-floor," it can be laid on an uneven slab.



Low cost parquet floor blocks are also laid in mastic directly on concrete. They can be made of any kind of hardwood used for flooring, including red and white oak, hickory, birch or maple.



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■ electricians conduit, wire mold

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■ general contractors furring strips, wire mesh

■ plumbers straps, ducts, brackets

■ telephone companies panel boards, wire clips

■ sheet metal workers downspouts, hangers

■ sign erectors metal, enamel, wood

■ plant protection relays, clips, conduit

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Serves all fastening requirements which are too tough to nail and too light to require RAMSET®, the original powder-actuated fastening system. Especially suited for use in cement block, cinder block and in mortar joints between tile and brick. Sets fastener with pin-point accuracy.

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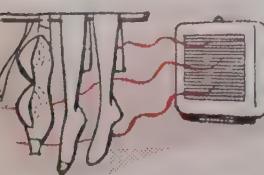
Division Of
COMMERCIAL CONTROLS CORPORATION



FOR BABY



FOR DAD



FOR DRYING LINGERIE
and

101 OTHER USES

In line with the laboratory's standard procedure, the new floorings are unpatented and are now being offered to manufacturers. As with many other firsts* achieved in the past by FPL, these two new floors should eventually be a real contribution to better houses at lower costs.

* Three examples of other notable contributions to building originally developed by FPL: stressed-skin plywood panels now used in about 75% of all pre-fabricated houses; sandwich panels now becoming an important building component; and a widely used chlorinated-phenol preservative that protects lumber from decay.

Higher FHA commitments for quality heating? Here's how

FHA policy has always been to give higher commitments for extra quality in a house, but the [evaluation] system has apparently fallen down for heating," according to Charles A. Bowser, FHA's technical standard's commissioner. The reason: "lack of communication" between FHA and the heating industry.

Bowser was speaking candidly to heating men assembled in New York at the annual meeting of the National Warm Air Heating & Air Conditioning Assn. What he said is also worth study by many others in home building.

Bowser reported that FHA appraisers are often at a loss to evaluate heating because mortgage applications do not spell out what the system includes. Moreover, many FHA men are unaware of new developments in the field, thus do not always spot a new system worth extra value. To solve such problems as these, Bowser offered the heating industry a 4-point plan for higher commitments:

- Local heating dealers should be trained to fill out properly the all-important Form 2005 ("Description of Materials"). A complete technical "exhibit" should be submitted to the FHA field office. "Too many people submit sketchy diagrams, for example," Bowser said. He added: "With the application you should state why you think a system is worth extra evaluation."
- Field offices require accurate cost data on each kind of heating. Cost facts are urgently needed so appraisers will have a yardstick for evaluating quality systems. "I cannot emphasize too strongly the importance of keeping us informed on heating costs."
- Regional meetings should be held by the industry to educate FHA field personnel about heating. "Our people will be glad to attend." (Bowser cited makers of wood windows as an excellent example of producers who have held such educational meetings for FHA around the US.)
- Heating engineers should keep FHA people informed about new developments by means of regular, pre-arranged calls (in addition to regional meetings). "Your field people can do much to keep us up to date on heating," Bowser said.

continued on p. 212

Laboratory tests prove—

CTA 11 tops standard performance requirements by 100% to 900%

This 3M Ceramic

Tile Adhesive far exceeds
ordinary needs for shear
strength and water resistance



Here's a ceramic tile adhesive that offers you dependability and durability *plus*. It's CTA 11, from the research laboratories of 3M.

Testing experts have proved: CTA 11 exceeds ordinary performance needs by 100% to 900% in the two most important requirements of a ceramic tile adhesive.

Look at the results of these strength and water-resistance tests!

CTA 11 held $4\frac{1}{4}$ by $4\frac{1}{4}$ inch ceramic tile with a shear strength of more than one and one-half tons per tile at 73.5°F.

At 125° F., CTA 11 held $4\frac{1}{4}$ by $4\frac{1}{4}$ inch ceramic tile with a shear strength of more than half a ton per tile.

At 20° below zero, CTA 11 held $4\frac{1}{4}$ by $4\frac{1}{4}$ inch ceramic tile with a shear strength of more than three and one-half tons per tile.

After 7 days water immersion, CTA 11 held $4\frac{1}{4}$ by $4\frac{1}{4}$ inch ceramic tile with a shear strength of more than three quarters of a ton per tile.

What's more, rubber-based CTA 11 handles easily and will hold tile in ceiling installations. It's not water soluble. It resists mold growth and is stable in storage.

Can any other ceramic tile adhesive offer you such dependable performance, along with all the cost-cutting ease and speed of "thin bed" setting?

On your next job use CTA 11. For similar advantages in setting ceramic floor tile, use CTA 12 by 3M. Both are available at your local tile distributors'.

Get full information and free literature on CTA 11 and CTA 12 fast! Fill out and send the coupon below right now!

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417 PIQUETTE AVE., DETROIT 2, MICH. GENERAL SALES OFFICES: ST. PAUL 6, MINN. MAKERS OF "SCOTCH"® BRAND TAPES, "SCOTCHLITE"® AND "3M" BRAND PRODUCTS

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Adhesives and Coatings Division, Dept. 125
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Company _____

Address _____

City _____ Zone _____ State _____

*Don't Calk it...
DRIVE it!*

Long lengths, light weight, tapered couplings make Permaline easy to install, cut installation time by two-thirds!

L-M Permaline Fibre Pipe makes good sewer lines

There's no line like Permaline—the best sewer pipe on the market for everybody—the dealer, the plumber, the builder, and the home owner. Permaline bituminized fibre pipe is easy to install. Once the job is properly done, it's in to stay!

These features make Permaline pipe a good deal for everybody:

Light, tough, strong. Easy to handle, on the truck and on the job.

Tapered coupling or fitting is simply tapped onto the tapered end of the pipe, to make a watertight, root-proof connection. Installation is fast and easy—no cement, no calking.

Permaline pipe is not harmed by hot water, detergents, acids, or alkalis. Permaline outlasts other pipe where strong acids or alkalis are handled.

With Permaline pipe, there is no infiltration of flood or ground waters. Thus, sanitary systems are not overloaded.

Permaline withstands heavy weights, soil shifting, freezing, settling, better than other pipe, because of its resilience and the tight joints that don't crack and leak.

Permaline is supplied in solid pipe, and in perforated type for septic-tank beds, land drainage, and footing drains. Lengths 5, 8, and 10 feet; 2 to 8 inch diameters. Full line of couplings, fittings, adapters.

254

L-M PERMALINE BITUMINIZED FIBRE PIPE for better sewers and drains

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Milwaukee 1, Wisconsin
Send me free Bulletin 54078
with complete information on
Permaline Pipe.

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HH56

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Company _____
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Type of business, please _____



LINE MATERIAL COMPANY
(a McGraw Electric Company Division)

Test project cooled for average \$83 a house, new figures show

"Operating costs should be a negligible factor in home air conditioning from now on," says Ned Cole, project manager of the Air-Conditioned Village experiment in Austin, Texas.

Cole's prediction is based on the fact that the village's 21 test houses were cooled last summer for an average electrical cost of only \$83 per house.



COLE

This figure covers a five-month cooling season and works out to an average of \$17 per month. Temperatures during the summer were "slightly hotter than normal." Because Austin is normally one of the nation's hottest towns, Cole draws this significant conclusion: cooling costs for similar houses—averaging 1,250 sq. ft.—should be even less in most other US cities, especially in the North.

The new figures also show how much operating costs can vary from summer to summer. The \$83 in Austin last year is a surprising 24% lower than the average recorded for 1954.

There are three reasons why '54 costs were higher than for '55, Cole explains:

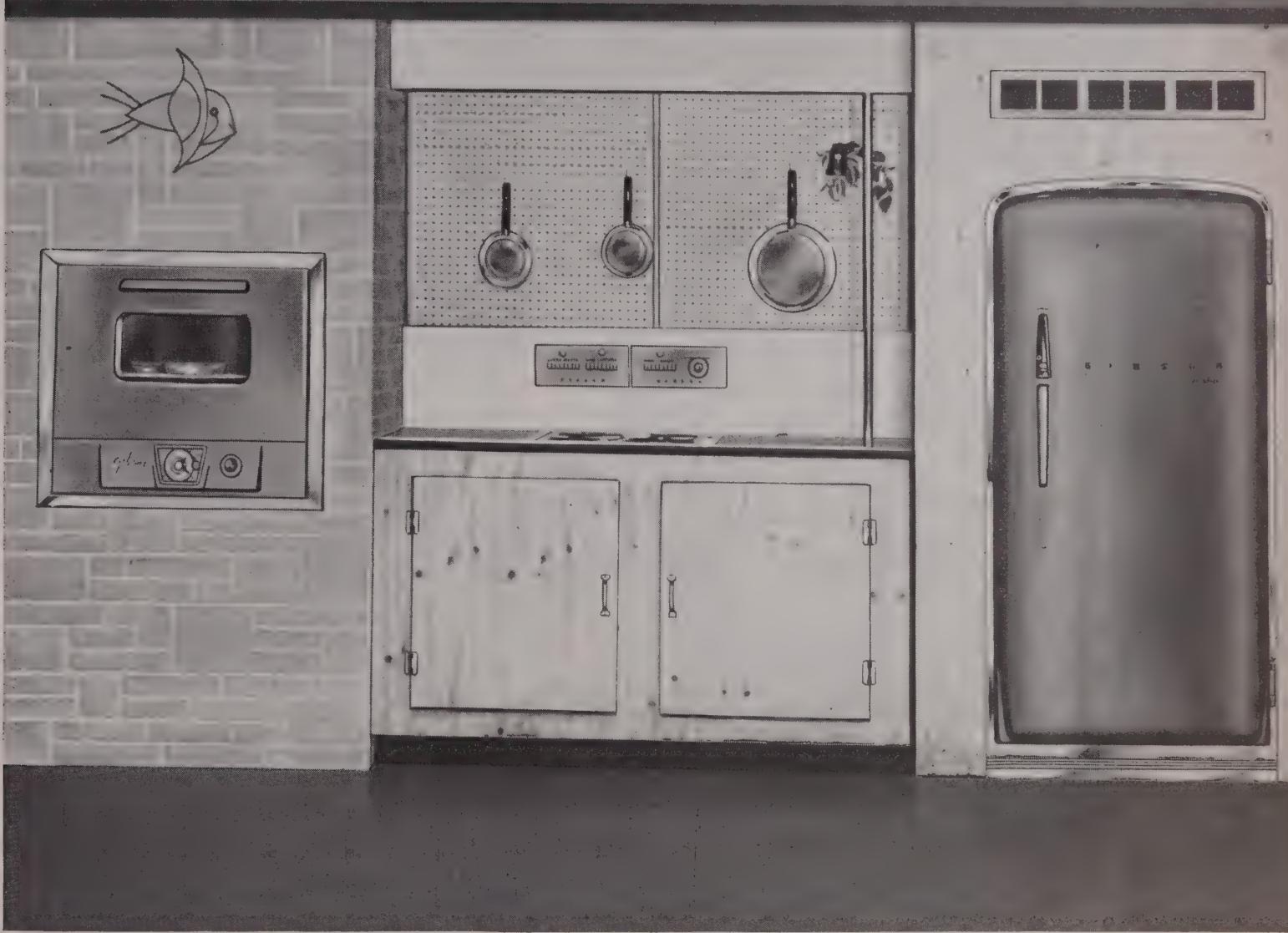
- Most important is that the summer of '54 was one of the hottest ever in Texas—14% hotter in Austin than for '55, according to degree-day records.
- Following the '54 tests additional insulation and shading devices were installed in eight of the houses.
- Finally, about half of the cooling units were readjusted for the '55 season.

MIT announces summer session on 'Plastics in Building'

In response to rapidly growing interest in plastics for houses, MIT will sponsor a special two-week plastics program for builders, architects and engineers, July 2 to 13th. The course should also appeal to manufacturers interested in using plastics for new products.

Reinforced plastics will come in for special emphasis. They "would be more fully utilized in houses were their advantages and limitations more widely appreciated," according to MIT's building experts. For information about the course write Mass. Institute of Technology, School of Architecture, Cambridge 39, Mass.

Now you can have a 'built-in" Gibson range and matching Gibson refrigerator!



The stunning big Gibson electric oven, finished in smart Coppertan, has been a smash hit for built-in kitchens. And now Gibson makes it possible to match a refrigerator to the Gibson Bilt-O-Matic range, to give your kitchens a completely built-in appearance.

And what a refrigerator! It's Gibson's famous Strat-A-Zone, with 4 separate cold zones for perfect food storage...with the freezer in a lower position for

more reach-in convenience. It's available in the exciting new copper color to match the Gibson Bilt-O-Matic oven. A convenient adaptable molding makes it easy to install and blend the refrigerator into any type of wall or paneling, with ventilator above.

Find out more about the quality Gibson appliances that give kitchens *complete* built-in beauty—mail coupon today!

*See Gibson on NBC's **TV "HOME SHOW"** with Arlene Francis every Thursday*

79 years of experience and millions of satisfied customers mean you can always rely on

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REFRIGERATOR COMPANY • Greenville, Michigan

ROOM & SELF CONTAINED AIR CONDITIONERS • REFRIGERATORS • FOOD FREEZERS • ELECTRIC RANGES • BUILT-IN RANGES

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GIBSON REFRIGERATOR COMPANY, Dept. H&H
Greenville, Michigan

Please send complete facts on Gibson Bilt-O-Matic ranges and built-in refrigerators.

Name _____

Firm Name _____

Address _____

City _____ State _____

for further details check numbered coupon, p. 288



Builder Everett Schneider Chooses R&M Cooling to Help Sell Homes

Mr. Schneider, of Kirkwood, Mo., writes: "After testing many so-called 'good' attic fans, we now use R&M units exclusively. Building luxury homes on a quantity basis calls for installations readily acceptable to prospective owners. The heavy construction of the R&M Fan, as well as the heavier steel louvers, cut noise to a minimum, thereby giving a quiet operation. You'll be happy to know these fans help sell a lot of homes for us."

Mr. Schneider sells comfort—not just shelter. That's why R&M attic fans are his choice. The heavier construction of R&M assures better results and longer trouble-free operation.

Selling homes in the summer months is much easier when you can demonstrate this low-cost way to more comfortable living. The retail price of this complete home-ventilation system is only \$145.00, including the heavy-gauge ceiling shutters finished in off-white color. Convenient "package" design

cuts installation costs to the very minimum.

Sizes available with certified air deliveries from 5,000 up to 16,000 C.F.M. Smallest sizes require only 18" attic clearance, the largest only 25". Each R&M fan is guaranteed 5 years; motor and shutter, 1 year. Send for our free booklet giving complete details. You'll find that this built-in sales talk creates customer acceptance and reduces your selling expenses far beyond the low cost of the appliance. Mail the coupon today.

EASY TO INSTALL—1-2-3!



1 Fan and shutter arrive set up. Simply place fan over framed ceiling opening. Rubber cushion makes it self-sealing!



2 Complete automatic shutter unit screws to ceiling opening frame; flange forms trim. No finishing needed.



3 Ready-made attic louvers can be installed quickly by one man. Sizes for each of various fan sizes.

ROBBINS & MYERS

"Package" **attic fans** 

IT'S FREE!

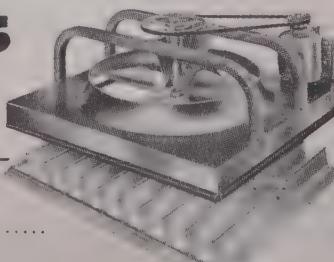
Please send your booklet, "R & M Comfort Cooling and Ventilating," A.I.A. File No. 30-D-1.

ROBBINS & MYERS, INC.
Fan Division HH-56, Box 3737, Memphis 14, Tenn.

Name

Address

City Zone State



a. Slide-away tub enclosure is made of plastic panels that fold away when not in use, slide together to form two rigid doors for showering. By Modernfold, "Tubmaster" works on principle similar to folding doors that partition rooms and closets. Self-adjusting feature aligns edge of door with jamb post for perfect fit. Nylon wheels in overhead track; nylon guides at bottom. Prices range from \$80-\$90, with bar hardware. From New Castle Products, Inc., New Castle, Ind.

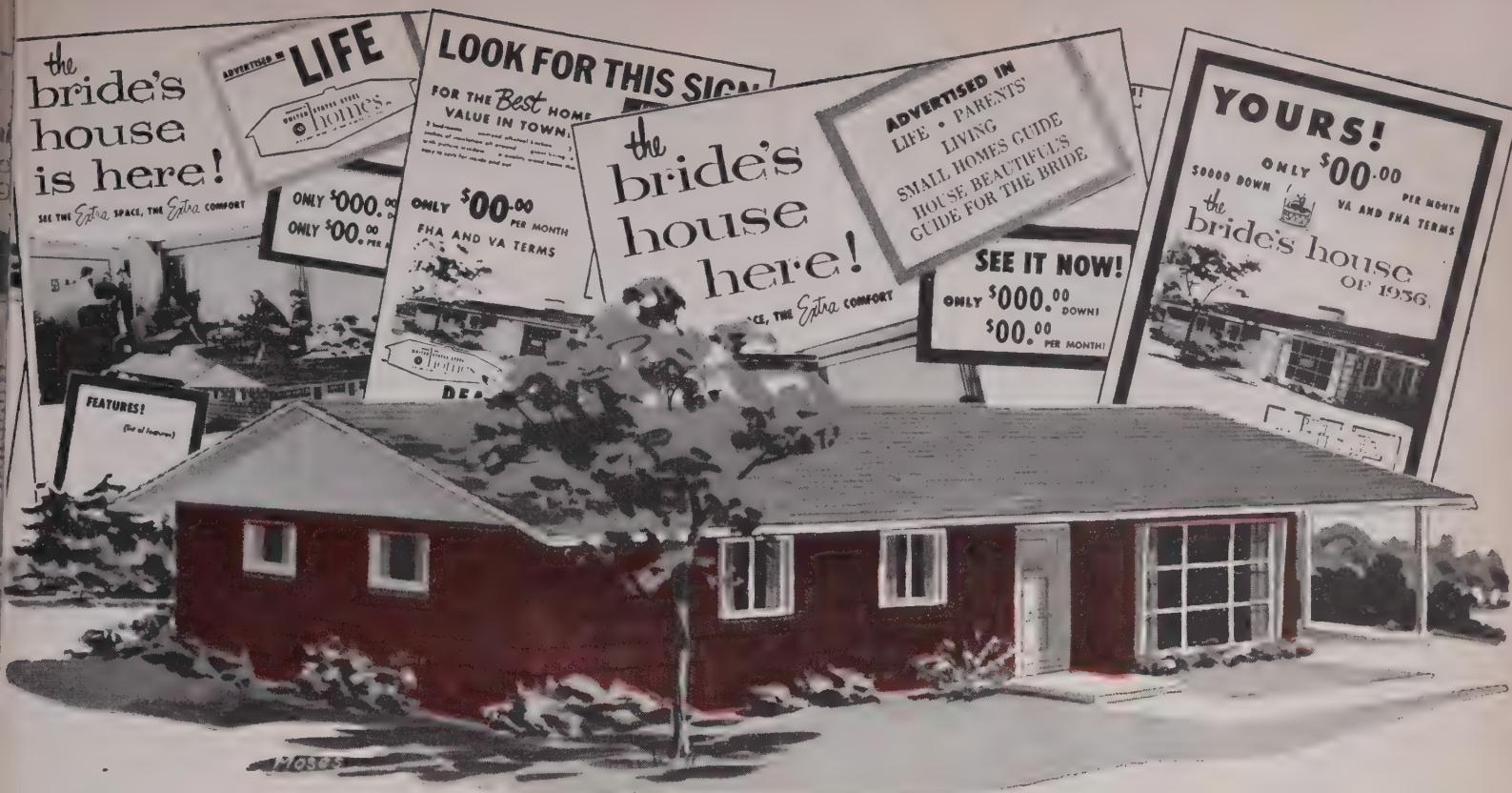


b. Tri-panel bath doors give maximum access to tub for cleaning, children's baths, since doors slide from either side. Open, they take up only about 1/3 of tub. Metal frames have a Chromalite finish, nylon roller bearings on top of door; nylon rat-tleproof bearings at bottom make panels easy to slide. Units are shipped F.O.B. Chicago in a knocked-down kit, glass extra. With glass, prices are approximately from \$125-\$150 installed. From the Hollywood Glass Shower Door Co., Chicago, Ill.



c. Glassheat deflector tops are electrically operated units of "Hammertone" finish glass, fused with aluminum strips. Metal reflector behind glass projects infra-red rays to heat you directly as do sun's rays. Room temperature varies no more than 5° between floor and ceiling. Tops can be surface-mounted or recessed, will not streak wall. Size above is 19" h., 26 5/8" l., 2 1/4"-1 3/4" d. Price is approximately \$80. From Continental Radiant Glass Heating Corp., New York 16.

continued on p. 220



OPTION

PROMOTION PROVES A U. S. STEEL HOMES DEALER



Manufactured by
UNITED STATES STEEL
 **homes, Inc.**

NEW ALBANY, INDIANA • SUBSIDIARY OF UNITED STATES STEEL

for further details check numbered coupon, p. 288

Miller
highly competitive —
designed for single glazing
These new aluminum sliding
glass doors — together
with Miller's other
two quality lines of
aluminum and steel —
give you greater price
and design latitude.

100% weatherproofed
with continuous Schlegel
double mohair pile. Fully
Alumilized finish for beauty
and maximum protection.



Three lines in your choice of metal—glazing—price:

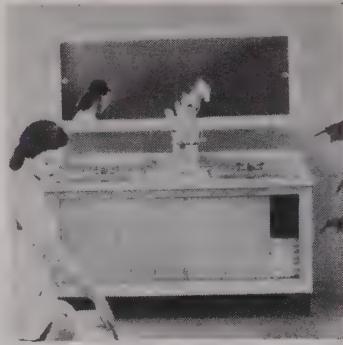
1. New aluminum for single glazing.
2. Aluminum with interchangeable single and dual glazing.
3. Steel for single glazing, dual glazing.

Miller

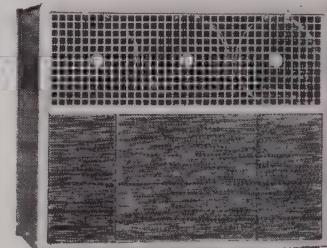
sliding glass doors

FRANK B. MILLER MFG. CO., INC.
3216 Valhalla Drive, Dept. HH
Burbank, California

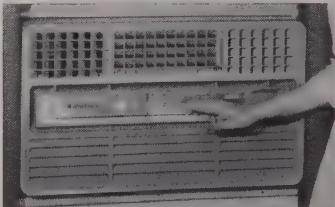
Please send info:
 New alum. door, single glazing;
 Alum. door for interchangeable glazing;
 Steel doors. Also
 Distributor's name. **NAME** **FIRM**
STREET **CITY** **STATE**



d. Bathroom vanity shown above combines good looks with good storage. Sliding fiber glass paneled doors open on compartmented storage that stows towels, mats, other bulky storage. Vanity is surfaced with Formica—in wood grains, the new Milano patterns, Pearl or the Skylark designs. Top holds two sinks, a cosmetic box. Sloping front gives leg room. Matching sliding mirror (above) opens on more storage. Unit like this one, about \$142. Mirrored cabinets extra. National Vanity, Bayonne, N. J.



e. Thinline room air conditioner, 16½" deep, almost fits within wall limits. Installation is versatile since unit can be put in flush with either inside or outside wall, mounted in upper and lower frames of double-hung windows, and in casement windows by means of an adapter to eliminate cutting or altering the window. Shallow depth is particularly good for "through-the-wall" installation. ½, ¾, 1 hp models measure 25" w., 20¾" h., 16½" d. Controls are behind the hinged front panel. Price not given. General Electric, Appliance Div., Louisville, Ky.



f. Admiral room air conditioner delivers weather-to-order. Seven colored push buttons regulate, circulate, mix fresh and cool air and withdraw stale air. Models can be flush-mounted or installed in window sill, upper part of window or between walls with aid of accessory mounting kit. Optional push button remote controls can be installed for units in picture windows or transoms. Model 100F7 1 hp unit with controls, thermostat, optional weatherseal fashion front, filter. Price about \$359.95. Admiral Corp., Chicago, Ill.

continued on p. 228

Here's why



specified again!

The two bathrooms in each of 500 Meadowbrook homes will all have Ingersoll Fixtures in color.

ARCHITECTS:

Melvin L. Wolfson, S. Guy Fishman

PLUMBING CONTRACTOR:

Loon Lake Plumbing

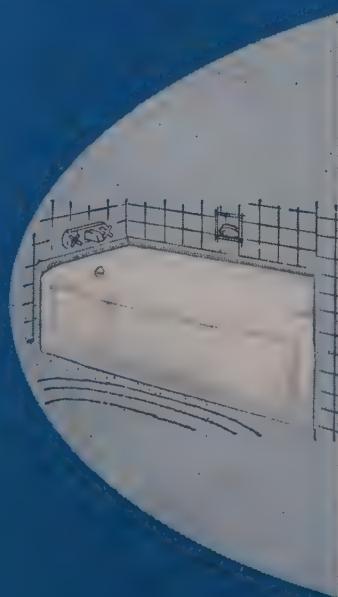
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Buck Plumbing and Heating

"We've built a reputation for delivering a lot of quality at a modest price. To continue in this, we constantly seek new sources that offer greater product value. The engineered economy and design of INGERSOLL Plumbing Fixtures fulfill our rigid requirements." Wilmer Wolfson, Builder, Meadowbrook Homes, Wheeling, Illinois.



MODERN STEEL BATHTUBS DO THE JOB BETTER—CHEAPER



"Engineered-Economy" by Borg-Warner means money in the bank to builders! Economy of material—economy of labor, coupled with the recognized B-W leadership in quality manufacturing, make INGERSOLL your best bet for building more bathroom value without raising your price.

Steel for lower transportation and handling . . . exact, die-formed dimensions for easier, lower cost installation . . . acid-resisting, stainproof porcelain for durability and easy maintenance . . . modern design and small premium for color . . . all bring easier, faster sales.

Write for complete information



INGERSOLL PRODUCTS DIVISION
Borg-Warner Corporation
1000 WEST 120TH ST., CHICAGO 43

for further details check numbered coupon, p. 288

1,800,000 PROSPECTIVE HOME OWNERS

will see this striking ELKAY ad during May and June. Present stainless steel sink prices are as low as cast iron... allow you to put this "prize" sink in every kitchen you build.



PAUL REVERE BOWL
COURTESY—GORHAM



Prized Possession

in your "prize" kitchen

STAINLESS STEEL SINKS

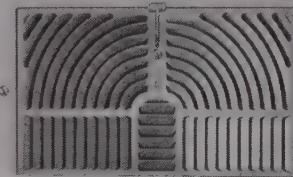


Gleaming, glamorous stainless steel immediately catches the eye when an ELKAY Lustertone Sink is the focal point of your kitchen. So graceful for the most gracious hostess, so modern for the young in heart, so helpful to every kitchen task—and, so very easy on your purse. Today you can enjoy the luxury of Lustertone for no more than the cost of an ordinary sink. Here is lifetime loveliness that softly reflects any of your most imaginative color combinations... takes but the swish of a damp cloth to keep always new looking. Write for literature and prices today!

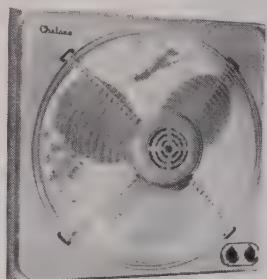
ELKAY MANUFACTURING COMPANY

1074 South 54th Avenue, Chicago 50, Illinois

The World's Oldest and Largest Manufacturer of Stainless Steel Sinks... Since 1902



g. Perimeter sidewall diffuser blankets walls with a curtain of warm air. "Fanaire" can be installed close to floor level to give an upward floor-to-ceiling fan-shaped air pattern; upside-down installation near ceiling gives same coverage in reverse. 10" x 6", 12" x 4", 12" x 6" sizes, unit is also available in models for baseboard mounting. Built-in damper provides control for system balancing. Prices range from \$2.90 to \$3.50 per unit, F.O.B. Cleveland. From the Auer Register Co., Cleveland, Ohio.



h. Chelsea window fan with automatic thermostat control turns on whenever temperature rises, shuts off automatically when room has cooled to desired temperature indicated by control dial on front panel. Deluxe two-speed electrically reversible fan comes in 16" and 20" sizes. Side panels adjust to any window size for easy installation. Front guard is bowed for extra safety. Model finished in mist gray enamel. UL approved. Prices: \$49.95 and \$59.95. Chelsea Fan & Blower Co., Plainfield, N.J.



i. Humidity dial on Mitchell dehumidifier keeps a constant reading of room humidity, indicates when to turn unit on or off. The Dyna-System air dryer removes from 2-3 gallons of water from a room in 24 hours depending on temperature and humidity. Other features include a high speed circulating fan, 3-way water disposal, filter. Unit is mounted on casters with hand holds to make moving easy. 1/6 hp motor, 4-watt fan motor, UL approved. Price is approximately \$139.95. From Mitchell Manufacturing Co., Chicago, Ill.

continued on p. 228



Think what you can do for dressers, built-in desks, kitchen units, and other functional storage space. Channels in all sides of these drawers allow for easy compartmenting.



Drawers are shipped completely finished, no sanding, no cutting. While handles and pulls can be easily added, in this installation the frame of the cabinet was notched to provide a finger hold.

***Molded phenolic drawers,
ready to use, give you***

More for your money!

...so you can offer your customers more for theirs. More in appeal, convenience and performance. And, for you—at *actual savings in cost* over quality drawers of conventional construction! It holds true for new homes and remodeling just as much as it did for this drugstore installation pictured here.

Drawers molded of BAKELITE Phenolic Plastic are rigid and warp-free. The one-piece construction features rounded corners for easy cleaning, built-in runners and center guides to assure smooth, non-sticking operation. Durable phenolic is unaffected by moisture, water, most chemicals or cleansers. The glossy surfaces clean easily with the wipe of a damp cloth.

Your own imagination is the only limit to the number of ways you can put these drawers to work pleasing customers. Send the coupon today for further information and names of manufacturers.



These drawers were molded by **Boonton Molding Co.**, Boonton, N. J., for Monticello Laboratories, Monticello, N. Y.

BAKELITE COMPANY,
A Division of Union Carbide and Carbon Corporation **UCC**
30 East 42nd Street, New York 17, N. Y.

The term BAKELITE and the Trefoil Symbol
are registered trade-marks of UCC

BAKELITE COMPANY, Dept. OE-78
A Division of Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.

Please send me information on variety of sizes of drawers molded of BAKELITE Brand Phenolic Plastics and names of manufacturers who can supply them.

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

for further details check numbered coupon, p. 288

Here's where high-capacity ONAN ELECTRIC PLANTS keep projects moving... save money



Supply power for your own crews, sub-contractors and big assembly-line equipment

To speed up overall progress on project building, many contractors keep one or more mobile, high-capacity Onan Electric Plants on the job site . . . in addition to smaller units. The Onan 10,000-watt, Model 10CW on the project above, has dual utility. It is used as a "central" source of power for several crews. In the photograph, the 10CW is shown parked at what will be an intersection. While carpenters are using its power in laying the sub-floor of one house, it also supplies power for three other partially-finished homes. It also supplies current for the 5 H.P. motor on the big assembly-line saw.

The Onan 10CW combines high output with relatively light weight . . . runs smoothly and quietly. Like all Onan mobile and portable electric plants it is completely Onan-built . . . with an Onan 4-cycle, 2-cylinder, air-cooled gasoline engine direct-connected to an Onan all-climate generator. Trailer-mounted . . . with all-steel housing (both available as accessories) it can be taken anywhere, in any weather. Onan Electric Plants speed completions . . . cut your costs.

Portable and mobile electric plants . . . 500 to 50,000 watts

Write for complete folder on gasoline and Diesel models



D. W. ONAN & SONS INC.

3200 University Ave. S.E., Minneapolis 14, Minnesota

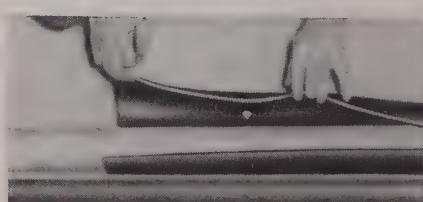
j. **Panelcoustic system** combines sound-absorbing mineral wool pads and 2' x 4' protective panels of perforated metal. Each component of the system has its own job: pads give acoustical efficiency, steel casing provides high light-reflection, easy maintenance and durability. Large panels are quickly installed, may be lifted up and out of carrying runners to get at utilities behind ceiling. Surface is easily cleaned, can be brush- or spray-painted. Price is not given. National Gypsum Co., Buffalo 2, N. Y.

k. **Electrend**, an electric forced air heating system, has a new model on the market. This one puts to use a sensitive hydraulic action thermostat which maintains a minimum of $\frac{1}{2}^{\circ}$ temperature differential. A bonnet control has also been added to operate fan independently of thermostat action. Fan now distributes all heat generated within heating chamber before shutting itself off. Unit shown above in effect turns room air upside down by drawing warm air from below ceiling, recirculating it down through duct within wall. Additional heat passes through electric heating chamber, is sent into room just above floor level. Prices from \$84.50 for standard unit to \$159.50 for dual intake-outlet unit. From Electrend Products Corp., St. Joseph, Mich.



ASSEMBLY-LINE POWER

Driven from an Onan 10KW unit, this 5 H.P. saw is being used to gang-cut and rout rafters. Even where highline power is at the site, it is often easier to plug-in to an Onan plant than string long wires.



l. **Pip-Jac** is an insulation jacket that protects hot or cold insulated lines. Of pre-formed polyethylene, the new jacket resists damage from heavy blows, won't chip, corrode, cannot become brittle. Ease of handling is one of the best features. Precut to 6' lengths and preformed to correct diameters, Pip-Jac is fitted around insulation and springs shut by itself. Jacket can be reused. Prices from 21¢ per lin. ft. per 2.88" outside diameter. Minimum order is \$50. Pip-Jac Co., Pittsburgh 16.

continued on p. 232



View of NAHB design award-winning Wirsching home. Note use of Flexivents in stacks and ribbons as well as with Flexiview Picture Window sizes.

on Flexivents. for



says Robert F. Wirsching, a leading builder in Indianapolis, Indiana

"I've used Andersen Flexivent Windows for the past year," states Mr. Wirsching, "and I'm completely sold on their use in the contemporary styled homes I'm building." A recent Wirsching home pictured on this page, designed by Architect Fran E. Schroeder, won the NAHB Merit Award for Design in Region 14. Speaking further of Flexivents, Mr. Wirsching reports, "I have found Flexivents to be complaint free which has entirely eliminated costly call backs for adjustments."

Look into the advantages Andersen Flexivents can offer for the next project you plan or build. Find out how high quality and low cost coupled with customer sales appeal are winning friends fast for Flexivents among men who build homes for sale.

You can get full information on the versatile Andersen Flexivent from your lumber and millwork dealer, Sweet's Files, or by writing Andersen. Andersen WINDOWWALLS are sold throughout the country including the Pacific Coast.

Andersen Windowwalls

ANDERSEN CORPORATION • BAYPORT, MINNESOTA

TRADEMARK OF ANDERSEN CORPORATION

Only KITCHEN MAID gives your homes all these

Plus Kitchen Values!

1. LUXURIOUS SHADOW-LINE STYLING—The smart, modern, new silhouette in kitchen styling—Shadow-Line by Kitchen Maid. Framed of kiln-dried hardwood, expressed in choice Birch paneling, Shadow-Line reflects the full beauty of Kitchen Maid's lovely natural finishes. With modern or period hardware.

2. BEAUTIFUL NUTMEG, COCOBARK OR SPICEBUSH NATURAL FINISHES—Three natural finishes of extraordinary beauty . . . plus a choice of lovely new decorator colors. Any appliance color can be matched at a nominal charge.

3. . . AND SO MANY STRONG-SELL CONVENiences! For years, builders and home-owners have looked upon Kitchen Maid as the kitchen of distinctive differences. A few of the clever, practical conveniences that identify Kitchen Maid as tops in functional value as well as in appearance are shown below.



Paper 'n' Pepper base solves storage problems. Slideaway wire hamper, with special sections for paper supplies and accessories.



Aluminum drawers slide smoothly, even when filled, on hardwood guides. Quiet, easy to clean. Won't rust or chip. Never need refinishing.



Rotating corner shelves turn smoothly, easily at fingertip touch, even under full load of heavy canned goods. Each shelf turns separately.



Hide-A-Rack is ideal for hanging freshly ironed clothes or personal laundry. Folds out of sight into cabinet without interfering with contents.



Rotating base shelves that bring bulky pots, pans and cooking utensils out into the open for easy selection. Easy to clean, convenient.



Mixer base cabinet. Spring-up shelf lifts mixer to proper height for use, slips back into cabinet for storage. Similar unit for beverages.



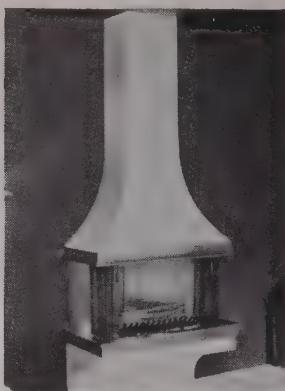
Double-duty laundry cart has lift-out hamper and storage space at rear. Mounted on casters, it can also be used for serving.



Kitchen Maid offers a complete selection of cabinets to accommodate most popular makes of built-in ranges and refrigerators.



Knife Nook. Slotted partitions accommodate a complete carving set. Cork bottom protects knife edges. Also drawer for condiments.



m. Prefabricated fireplace bolts to studing, either flush to wall or recessed into it. Chimney sections are extended through roof and chimney housing flashed in place. Unit is complete in itself, with insulation barriers, damper built into hood. Firebox is raised off floor. Uni-bilt can be painted to blend with or contrast room colors. Stainless steel trim adds to the good looks. About \$395, depending on number of intermediate chimney sections needed for installation. Unit is made by Vega Industries, Inc., Syracuse, N. Y.



n. Fireplace screen completely encloses hearth. Twin doors of heat-tempered plate glass are set into solid brass frames. Doors radiate heat smoothly, evenly, eliminate fumes and soot from smoky fireplaces. Adjustable louvers at bottom give control for fast or slow fire. Doors can encase corner, two-way and open fireplaces, too, which is a safety feature in a house with children. Screen can be used for wood, coal or gas fireplaces, wide-swinging doors make loading easy. Price not given. The Thermo-Rite Mfg. Co., Akron, Ohio.



o. Wireless intercom plugs into any AC or DC outlet without wiring, installation. Two-station system makes it useful in an office, at home. System may be operated between buildings on the same power line up to a mile apart. Silencing control eliminates power line interference, two or three wire line selector switch will match all types of house wiring. UL approved. Model FW-20 shown above has ebony black cabinets with antique gold panels, sells for \$79.50. 8" x 4" x 4". Fanon Electric Co., Jamaica, N. Y.

continued on p. 238

Mail coupon today for complete details!

KITCHEN MAID
FIRST AND BEST IN
KITCHENS
OF WARM AND FRIENDLY WOOD

Kitchen Maid Corporation
465 Snowden Street, Andrews, Indiana

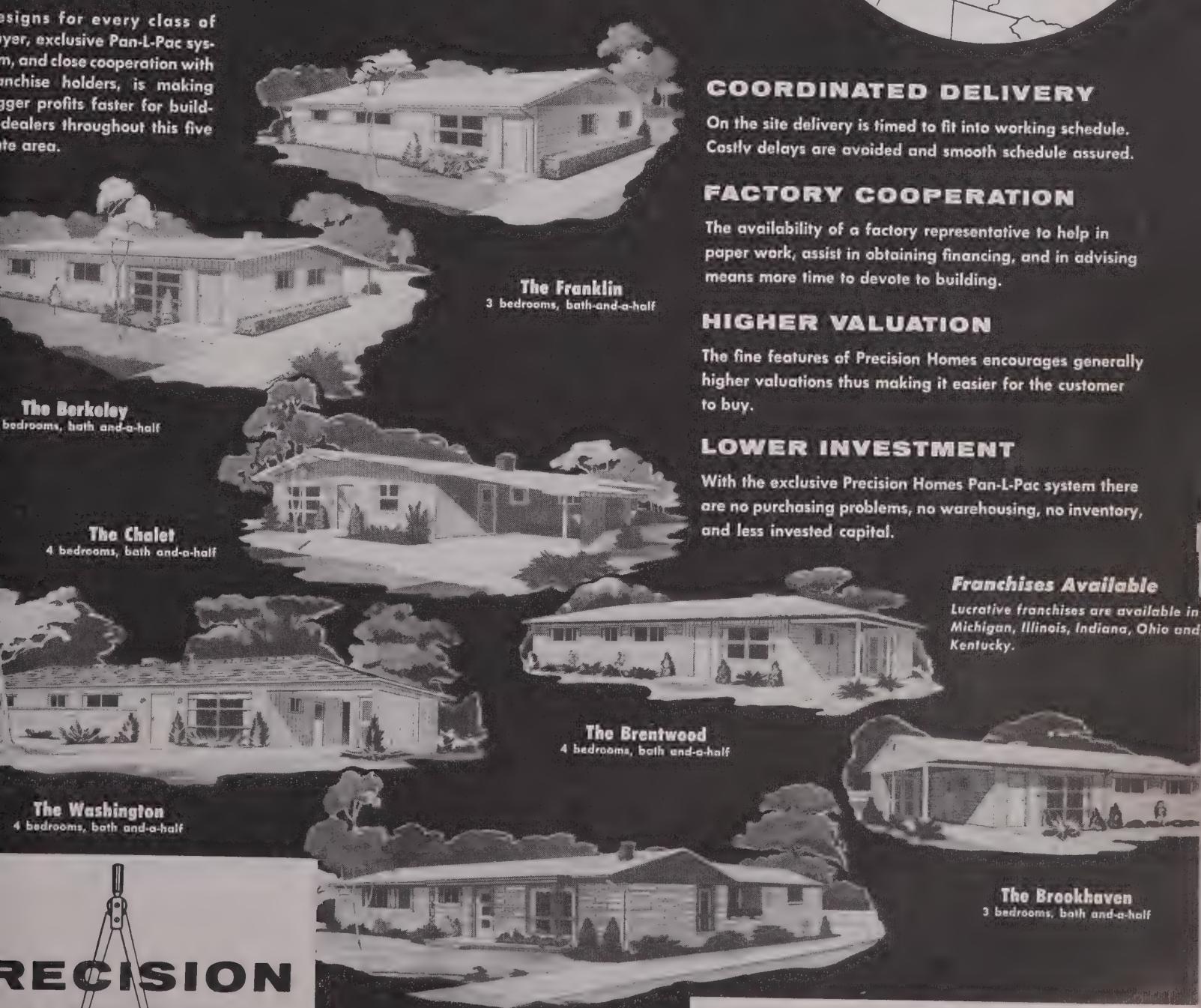
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3 bedrooms, 2 baths

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I am interested in your program. Please send me

- Full details on your builder-dealer franchise.
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• Address _____

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meets modern
building requirements



No home is modern today unless it is modern underground, too. That's why builders, architects, plumbers and sanitary engineers are recommending and using dependable, non-metallic Orangeburg Pipe. Rust-proof . . . root-proof . . . tough . . . resilient—Orangeburg lasts for years underground.

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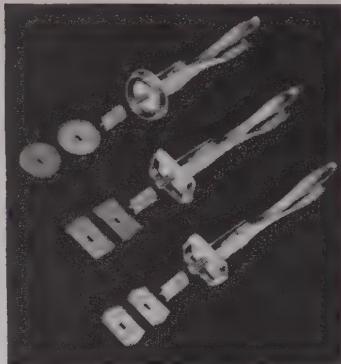
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p. **Quickkutter** cuts perfect openings for switch boxes quickly in $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{5}{8}$ " drywall that fit single, double or multiple 2 x 3 switch boxes or 2 x 4 or 4" round boxes. Patching of irregular holes is eliminated according to manufacturer since tool does not break away excess drywall, won't split back side of the sheet, and doesn't damage the paper facing on either side. Any size, complete with extra male cutter and pilot hole cutter, \$24.95. Three types, accessories, shown above. Hartmeister, Denver 4.



q. **Rain-O-Matic water softener** has a handsomely styled exterior sized in keeping with basic cabinet dimensions. A 24-hour clock turns unit on for pre-set regenerating cycle, shuts off automatically. Salt tank is easily accessible, holds 300 lbs. Softener is finished in porcelain inside and out which makes it rustproof, easy to clean. Four models with seven-day or 12-day clocks, in normal or flush-to-the-wall installations, cost about \$395 each. From Globe American Corp., Chicago 54, Ill.



r. **Bulldog pin bolt** drives insert into any $\frac{1}{4}$ " hole of proper length, expand by hitting drive pin as you would a nail. Three head types—round, flat and stud—come in six lengths in $\frac{1}{4}$ " diameter, may be used for blind hole, toggle-action anchoring in concrete, brick, wood, tile, cinder block, etc. Round head type in six sizes from \$9 per 100 to \$14 per 100; flat head in five sizes from \$10-\$14 per 100; stud bolt type in three sizes from \$16-\$19 per 100. Manufactured by J. D. Polis Mfg. Co., Chicago 23, Ill.

continued on p. 242

a crisp \$100 bill"

...That's what Kansas City builder calls Bildrite savings

Builder-Engineer Jed K. Giles says, "The saving I made with Bildrite Sheathing was just like finding a nice crisp \$100 bill . . . except that we knew just where and how to find it. The saving made us just as happy as the good-looking results we got on this \$31,500 home, because every dollar bill counts in this market."

This award-winning tri-level home, sheathed with Bildrite, was chosen for the award by House & Home magazine. Named most popular

in the Parade of Homes by The Kansas City Star, it was sold within 3 days after its first showing. Design was created by Linscott, Kiene & Haylett, Kansas City architects.

Jed Giles, active NAHB member, has used the full line of Insulite products ever since he started business.

Want to figure your own savings with Bildrite? Write for free literature and cost-comparison forms.

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INSULITE**



INSULITE, Made of hardy Northern wood

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Almost everyone agrees that a basement is a desirable addition to a home... yet too many basements are merely damp, dark rooms that are not fit for recreation or storage. However, better days are here... for the proper installation of Sealight Premoulded Membrane, during the original construction, provides permanent protection against vapor migration and thereby completely eliminates dampness. Now basements can provide a warm, dry, liveable area that's ideal for the storage and recreational requirements of a family. Wood or resilient flooring and paneled wall treatments are not only feasible but may be safely and permanently installed. A warm, dry basement not only provides a more liveable home but a home that's also more salable in the future.

INSTALLATION DETAILS



Sealight Premoulded Membrane applied to the walls and under the slab (as illustrated) prevents any pressure movement of vapor or capillary (wick) movement of free water. It provides the necessary impaction sheet and vapor seal between the footing and wall. Premoulded Membrane need not be bonded to the wall as it can be "hung" from a reglet or masonry.

SEALIGHT

Premoulded Membrane

TRADEMARK

the industries only **TRUE VAPOR SEAL**—is your one guarantee of warm, dry basements

The one sure way to "eliminate" the ravages of destructive moisture is with the use of Premoulded Membrane in the original construction. Sealight Premoulded Membrane has a permeance rating of only .0066 grains per square foot... is resistant to rot, mold, and termites... is strong enough to resist tearing and puncturing... will expand and contract

with the slab above and is quickly and easily installed. We sincerely advise your comparison of Premoulded Membrane against all other vapor barrier products... we're sure that once you do you'll also agree that there's only one **TRUE vapor seal on the market**—Premoulded Membrane.

ARCHITECTS, BUILDERS, DEALERS . . .

WRITE TODAY for complete information that tells you where, why and how to use Sealight Premoulded Membrane, the only true vapor seal and Corkite, the resilient, impermeable perimeter insulation.

"Guardian of the Home"



W. R. MEADOWS, INC.

10 KIMBALL ST.

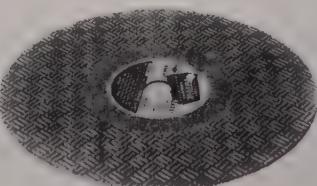
ELGIN, ILLINOIS



s. **Dramex ready-mixed texture paint** resurfaces and redecorates interior walls and ceilings all at the same time. Paint fills seams, dents, nail holes in wallboard construction, actually puts on fresh plaster and paint in same operation. Dramex dries to smooth, plaster-like texture in about four hours, is scrubable. White and 12 colors hide and fill plaster cracks, surface blemishes. About \$4.95 a gal. for white, light tints, a little more for darker colors. Prices slightly higher in West. The Reardon Co., St. Louis, Mo.



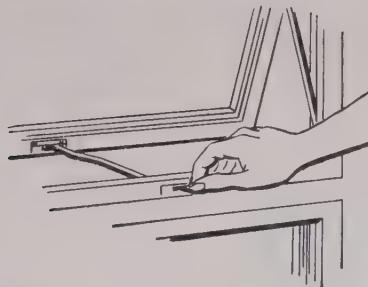
t. **Dial your own lighting** with a Luxtrol light control which gradually room light from bright to dark just by turning dial. For instance, you turn up dial for full brightness for reading, make light as dim as you like to simulate candlelight dining, turn way down for night lights. Luxtrol unit installs almost as easily as on-off switch, handles any number of lamps up to 360 watts. Variable autotransformer operates from a 120-volt AC source; unit uses only amount of current needed for illumination desired. About \$30. Superior Electric Co., Bristol, Conn.



u. **"Tuffie" blade** for cutting masonry incorporates safety and speed in its design. Blade is reinforced throughout with tough fiber glass, 3-ply reinforcing around hub on both sides gives 3-way protection while cutting. Manufacturer says friction-free sides add hundreds of cutting edges to each blade, give faster, cleaner cutting. Blade comes in 12", 14" and 18" diameters for cutting all masonry material. The 14" blade sells for \$5.97 each when purchased in packages of 10. Eveready Brik-Saw Co., Chicago 5, Ill.

continued on p. 246

UNDERSCREEN OPERATOR locks in any position



A pin-and-socket device locks the sash in many positions between fully open and fully closed. The aluminum Underscreen Operator is PELLA'S exclusive way of opening and closing sash without screen interference. And it's furnished at no extra cost.

OPERATES QUIETLY

The aluminum Underscreen Operator arm slides through a solid Nylon guide for smooth, quiet operation. Guide is wear resistant...needs no lubrication.

Inside screens are inconspicuous. They save storage space because they may be left in place year 'round. Wood frame screens are included with all windows that ventilate. All-aluminum screens available at nominal extra charge.

PELLA MULTI-PURPOSE WINDOWS are low in cost, yet have these quality features and many others—like all-aluminum and stainless steel hardware and stainless steel weatherstripping, sash and frame of select western pine, toxic-treated, mortised and tenoned. Self-storing, inside "storms" available when specified. A packaged window. Completely factory assembled. See our catalog in Sweet's Architectural or Light Construction File. Representatives throughout U. S. and Canada.

The Pella logo is written in a stylized, flowing script font. A small registered trademark symbol (®) is located at the top right of the letter 'e'.

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Please send helpful 20-page book,
"Library of Window Ideas."

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ATTENTION MR.

BUILD PROFITS and GOODWILL

Use nichols
NEVER-STAIN
RUSTPROOF
ALUMINUM
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RUSTPROOF—will not stain or streak siding and trim
STRONG—made of high-temper aluminum alloy
PACKAGED FOR THE JOB—in smart color-coded dust-proof pull-string containers having complete coverage tables.
ECONOMICAL—eliminate countersinking and putting
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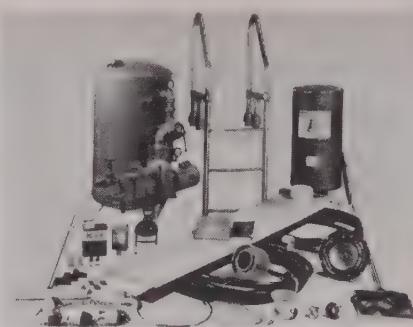
WOOD CASING (Sinker Head) 6d, 7d, 8d, 10d
WOOD SIDING (Caving Head) 6d, 7d, 8d, 10d
CEDAR SHAKE 1 1/4", 1 3/4"
CEDAR SHINGLE 1 1/4"
"FILE-GRIP" (Asbestos Siding) 1-7/16", 1 3/4"
"SCREW-THREAD" (Asbestos Siding) 1 1/8"
STANDARD SHINGLE 1/8", 1 1/4"
GYPSUM LATH 1/8", 1/4", 1/2"
ROOFING (Plain) 1/8" to 2 1/2"
ROOFING OR TRANSLUCENT PLASTIC PANEL (Screw Grip with neoprene washer attached) 1 3/4", 2", 2 1/2"

Also available in 50 lb. cartons

Write for free samples and descriptive literature

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WIRE & ALUMINUM CO.
DAVENPORT, IOWA
World's Largest Manufacturer of Aluminum Nails

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v. **Swim Pool Pak** bears Esther Williams' name, comes in two sizes for permanent, in-the-ground installation. Poolskin is electronically preformed in one piece, fits precisely against wall construction and hard packed sand bottom, is kept in place by water pressure. Two sizes: Suburban 15' x 30' and The Autograph 18' x 36' come in standard and deluxe Paks. Deluxe items include diving board, ladder, underwater light. Prices from \$1,295 plus installation for standard Suburban up to \$1,995 plus installation for Autograph Deluxe model. International Swimming Pool Corp., White Plains, N. Y.



w. **Ornamental iron designs** go well with either contemporary or traditional architecture. All components—railings, posts, porch columns—lend themselves to a variety of installations. You can get a tubular type iron in railings 32" and 42" h., panels 8' long. Porch columns run from 5 1/2" to 9 1/2" high, accessories included. Iron resists rust, is easy to install. Approximate prices from \$2.90 to \$3.40 per foot for welded ornamental railing. Step railing from \$3.35 to \$3.85 per foot. The Engasser Mfg. Co., Lebanon, Ohio.



x. **Highland Stone**, a precast concrete building stone, is processed by fracturing green concrete. Each stone has a rough virgin face of its own due to patented process. Colors—pink or salmon, light and dark gray, buff, tan, dark brown and green—are obtained by pure mineral color pigments which give lasting color. Average installed price about \$1.25 to \$1.50 per sq. ft. Patent for name and trademark pending approval. Standard production is 1 1/2" h. x 24" l. and 3 5/8" h. x 24" l. Matson Ston-O-Fect Co., Olean, N.Y.

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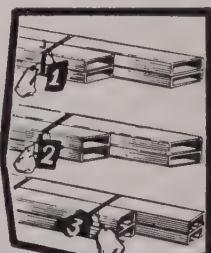
EASIEST, FASTEST INSTALLATION!

Glamour ALUMINUM SLIDING GLASS DOORS



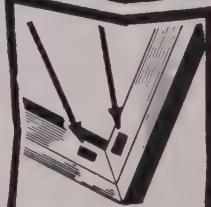
EXCLUSIVE ORGANIZED PACKING

3 separate packages in 1 master shipping carton. 1st contains stationary panel; 2nd has outer frame; 3rd holds sliding panel. Each package complete with own hardware and screws.



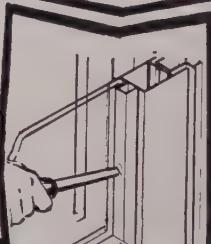
EXCLUSIVE ASSEMBLY COLOR CODES

Simply match the color coded corners placed on each part within each package.



EASIER TO GLAZE THAN A WINDOW

1. Remove aluminum bead.
2. Set Glamour vinyl channel around glass edge.
3. Place glass in door panels.
4. Replace aluminum bead.



CUSTOM QUALITY at STANDARD PRICES

LIST PRICE

\$154.95
6 FT. UNIT

SPECIAL BUILDERS PRICE, IN QUANTITY AS LOW AS

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For single glazing. Thermopane and Twindow slightly higher.

WE PAY FREIGHT TO YOUR SITE!

Available KD in multiples of 3' and 4' (6', 8', 9', 12', 15', etc.) Overall opening height 6'-9 1/4".

WAIT TILL YOU READ THE ENTIRE GLAMOUR STORY...

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Please send me complete information and prices for GLAMOUR Aluminum Sliding Glass Doors. I am a
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to add these extras that attract prospects

Texture is one of the most sought-after "extras" you can add to a house these days. A glance at any of the popular influential homemakers' magazines will show why. Their editors promote the glamour of texture, issue after issue. One of the most effective—and least expensive—ways to give interiors a textured look is with resilient floors. Armstrong floors, in particular, offer you almost unlimited opportunities. They're available in the widest choice of exclusive textured effects ever featured—in every price range and for every type of room. Armstrong floors offer the rugged beauty of stone and brick effects, the classic elegance of marble, the rich look of fabric, the glowing warmth of cork.

Cork Tile, a "natural"

One of the most popular textured floors is Armstrong Cork Tile. In the main living area, this distinctive floor wins the approval of even your most conservative prospects.

The textured look and natural colorings of cork are also available in economy materials—Armstrong Asphalt Tile and Excelon Tile, superior vinyl-asbestos floorings.

Inlaid textured effects

Among sheet resilient floors, Armstrong offers you by far the widest variety of textured effects.

Armstrong Corlon—a quality vinyl sheet flooring—in the best-selling Terrazzo* styling, and in Decoresq®, the only plastic flooring with inlaid designs—including homespun and carved carpet "textures."

In Armstrong Linoleum, Spatter® recreates the "spatter-dash" floors of colonial days. And Armstrong Embossed Inlaid Linoleum is the only resilient flooring that is actually embossed in the manufacturing process. The realistic, three-dimensional beauty of its flagstone, brick, mosaic, plank, and carpet effects impresses prospects immediately.

"Texture" that's easily cleaned

Coupled with their beauty, all Armstrong floors provide qualities of durability and easy care that make any home

Put brick's textured beauty—in easy-to-care-for Armstrong Embossed Inlaid Linoleum—in your next model home and see how it helps sell. It looks real—it almost feels real—with its embossed mortar lines and richly textured "bricks."



more desirable. Call your flooring contractor now and ask him to show you the many textured effects available in Armstrong floors. They will inspire unusual decorating schemes to set your houses apart from competition—and turn prospects into buyers.

Merchandising aids

People know that the Armstrong name stands for the highest quality, therefore it's a good selling idea to feature Armstrong floors in your advertising and point them up in your sample houses. Ask your flooring contractor or Armstrong Architectural Builder Consultant for these sales aids: floor identification signs for every room, flooring literature imprinted with your name, model home floor policy, newspaper ad-mats and slugs, radio and TV commercials, and sales pointers for salesmen. Or write: Armstrong Cork Company, 1605 Sixth Street, Lancaster, Pa. *Trade-Mark

Armstrong
THE MODERN FASHION IN
FLOORS

LINOLEUM • PLASTIC CORLON® • EXCELON® VINYL-ASBESTOS TILE
CUSTOM CORLON PLASTIC TILE • RUBBER TILE
CORK TILE • ASPHALT TILE • LINOTILE®

Now you can give your homes the dramatic appeal of counter tops that match resilient floors. Ten designs in Armstrong Corlex*, a new high-pressure plastic laminate for counters and walls, match the design and color of popular styles in Armstrong Corlon sheet plastic floors.



for further details check numbered coupon, p. 288

LAMINATED BEAMS

maintain original beauty



• • • • No splitting,
warping
or twisting

"Exposed beam homes sold 6 times first day," report Hart & Weiss, architects on the Rilco Laminated Beam homes built for Westwood Estates in Strongsville, Ohio. These homes sell because their beauty is permanent. Rilco beams offer a fine machine finish and unlike solid timber, they will not split, twist or warp.

Individual plies of West Coast Douglas Fir are kiln dried to approximately 12 per cent moisture content before being glued into finished Rilco members—thus dimensional

stability and permanent beauty are assured—an important factor in selling any home.

Available in sizes difficult or impossible to obtain in solid timber, Rilco Beams can be flat, pitched or tapered for overhang. Erection is remarkably easy. Westwood Estates contractors, R. A. Koplow and I. W. Konigsberg found Rilco "plank and beam construction saved valuable time and money—it took only one hour to tilt up the post and beam frame."

Rilco laminated beams, arches are offering architects new latitudes in designing homes, churches, schools, commercial and industrial buildings. Built to precise specifications, they come on the job securely wrapped, ready for any wood finish. Rilco service engineers will gladly consult with you.

Write for information.



Contractors R. A. Koplow and I. W. Konigsberg erected these twelve Rilco post and beam frames in one hour. Pitched beams spaced 6' o.c. have a clear span of 21' 6" with a 3' 6" overhang.

RILCO
works wonders with wood

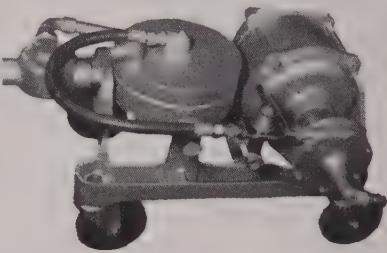
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2543 FIRST NATIONAL BANK BLDG. • ST. PAUL 1, MINN.
District Offices: Wilkes-Barre, Pa.; Fort Wayne, Ind.; Tacoma, Wash.



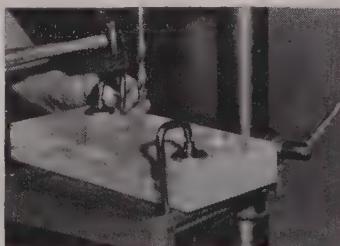
Roof deck also serves as finished ceiling eliminating purlins, joists, bridging, sheathing, lath and plaster.



y. Wall jack lifts whole sections of pre-fabricated walls easily, quickly, can be set up in less than five minutes. Cable anchor attaches to top plate by temporary nailing. Anchor mounts two rollers which follow upward along a track formed in gyn pole, has a spring actuated safety dog which engages fixed stations built into gyn pole so that you can lift wall, keep it from falling back even if cable breaks. Geared winch has built-in ratchet to prevent backward movement of spool. \$125 F.O.B. Dearborn. Marvin W. Coleman, 4140 Syracuse St., Dearborn, Mich.



z. Hot spray heater substitutes heat for thinner in paint spraying operations. Viscosity reduction by heat, rapid evaporation of hot solvents at spray head results, company says, in uniform delivery of a high solids film deposit which keeps shrinkage and penetration at a minimum, gives better coverage, uniform finishing. Spee-Flo model gives low pressure spraying so material flows on without danger of orange peel and overspray. Several models for fixed, mobile and conveyorized installations. Price not given. Spee-Flo Mfg. Corp. Houston 2, Texas.

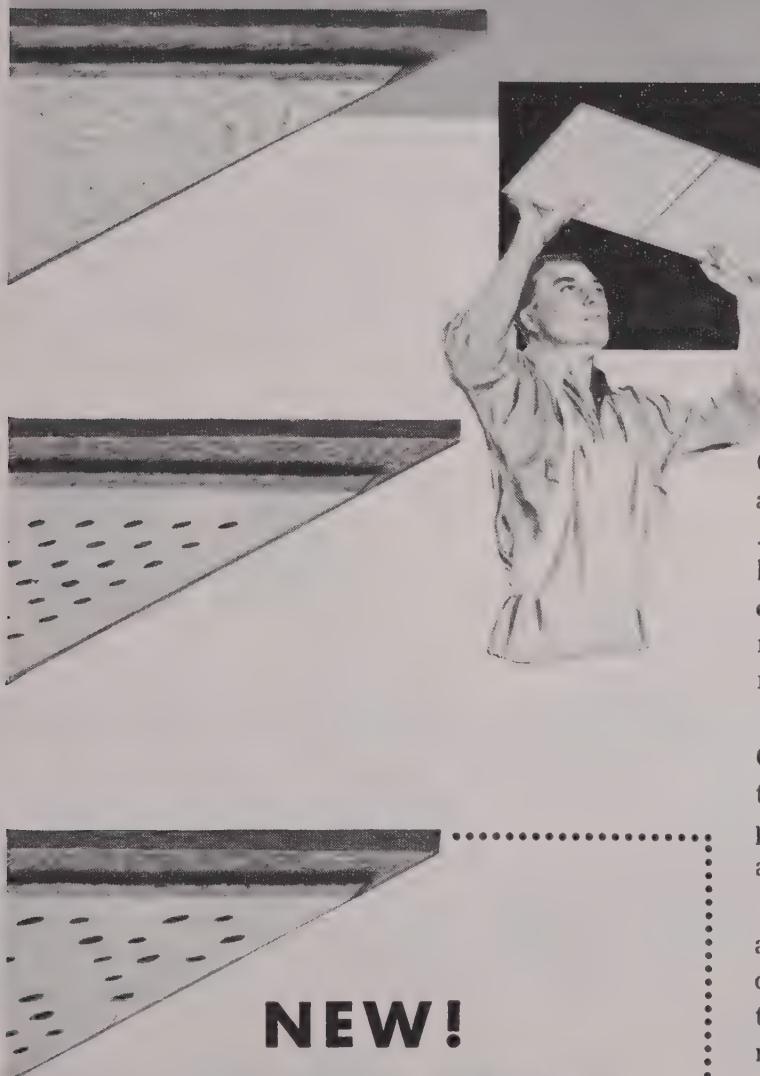


aa. J-Lock clamps hold material securely for drill press operator. Clamps are inserted in holes drilled at both ends of table. When bottom of "J" is tapped, spring action of leg in hole holds clamp tightly in position. Another tap loosens and removes clamp. J-Lock is especially useful for holding long pieces at the diagonal, firmly grasps material up to $2\frac{1}{2}$ " thick. Price is about \$2.95 per pair. Manufactured by the Delta Power Tool Division, Rockwell Manufacturing Co., Pittsburgh 8, Pa.

continued on p. 254

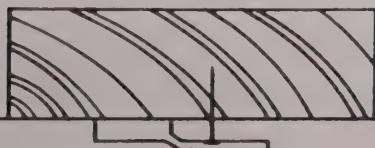
Insulating Tile Board

**Speeds Installation in
New Construction and Remodeling Jobs!**



NEW! "E-Z" JOINT DESIGN

New, scientifically-designed "E-Z" Joint speeds application, conceals staples or nailheads. Units join quickly, interlock securely. Note tapered tongue for easier positioning without forcing, and improved stapling (or nailing) flange, for easier alignment and fastening.



**...COVERS TWICE THE
CEILING AREA WITH EACH TILE!**

Celotex Twintex Insulating Tile Board provides an added selling feature for all your new home building . . . with eye-appeal and construction advantages that help you make quicker, easier sales. For attractive, economical finishing of those "special" areas like TV rooms, recreation rooms, all-family all-purpose rooms! Excellent for your remodeling jobs, too.

Cross-scored to look like two square tiles, each Celotex Twintex Tile goes up in much less time than two square units. You reduce your costs through simpler application (one-trade, one-step), and because all finishes are *pre-decorated*.

Ideal for interiors of all kinds . . . in a wide range of attractive colors and textures to meet every job requirement. Combines superior insulation value with truly outstanding decorative appeal. Available in new random perforated, standard perforated, linen white and sculptured types; or with plain surface in choice of smart decorator colors.

GET THE FACTS NOW!

Contact your Celotex representative today, or write direct, for complete information on how Celotex Twintex Insulating Tile Board can help you sell more remodeling jobs . . . make your new homes more saleable . . . while holding costs down!

Build Better . . . Build with Genuine

CELOTEX
REG. U. S. PAT. OFF.
BUILDING PRODUCTS

THE CELOTEX CORPORATION, 120 S. LA SALLE STREET, CHICAGO 3, ILLINOIS

**PUT OUR EXPERIENCE
behind YOUR home
AIR CONDITIONING**

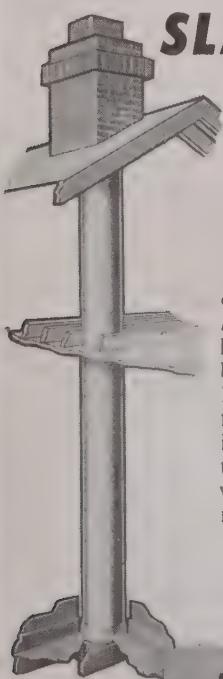


Many builders, through lack of personal experience with year-around air conditioning, hesitate to put it in their homes—but *not those who specify Majestic*. They know the full weight of Majestic's many years of "home comfort" experience stands firmly behind their ultra-modern 1956 units. In remodeling or in new construction, the contractor expects and gets all the benefits of Majestic's research and engineering.

Majestic 1956 Line IS COMPLETE

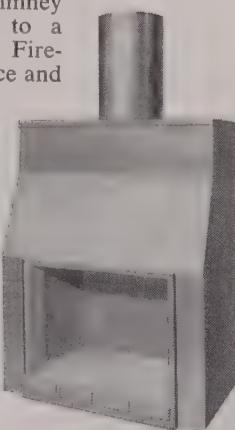
Whatever system you want—2, 3, or 5 ton self-contained water-cooled units or remote air-cooled models, in matching twin units or for add-on installations—Majestic has it in the 1956 line. For only a very few dollars, a Majestic Furnace installation can be equipped with a remote-system evaporator cabinet, ready for "the works" whenever the home owner decides on all-season air conditioning.

**SLASH Chimney and
Fireplace COSTS**



Majestic also makes the revolutionary metal Thulman Chimney that *cuts erection costs to a minimum*, and Thulman Fireplace, the complete fireplace and chimney that *needs no masonry*. Both have simulated red-brick top housings. Both are U.L.-listed for *zero clearance* installation in homes to two-stories high, with or without basement.

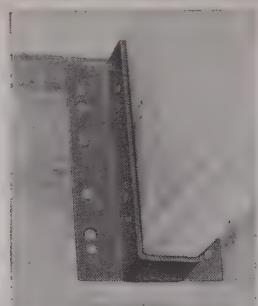
*Call your nearest
Majestic Dealer,
or write today*



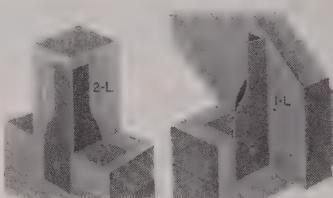
The Majestic Co., Inc.

416 Erie Street

Huntington, Indiana



bb. **Heavy duty joist hanger** does away with the need for notching and subflooring; joist can be mounted flush with floor beam. Hanger takes nails or heavy duty lag screws, is easy to position, and ought to be of particular use in reconstruction or remodeling work. Hangers are made of 13 gauge rust resistant galvanized steel and come packaged 50 to the carton. They cost approximately 50¢ each. Manufactured by the F. D. Kees Manufacturing Co., Beatrice, Neb.



cc. **Cleveland framing anchors** can be used throughout a project on entire framework. They give stronger nailed wood joints, eliminate notching and ledger strips, toe nailing and splitting, and provide automatic spacing for joists and rafters. Nos. 1R, 1L anchor rafters, trusses to top plate and purlins to trusses. Nos. 2R, 2L anchor girts to columns, beams to posts, studs to sills, plates. Shipped 100 pcs. right or left hand per carton, with nails. About \$10.15 per 100 F.O.B. Cleveland. Cleveland Steel Specialty Co.



dd. **Keywall** is 18 gauge galvanized woven wire for masonry wall reinforcement. The $\frac{3}{4}$ " wide selvages have wires arranged in a pattern that provides maximum efficiency when imbedded in mortar joints of masonry walls. Large number of "keys" and large surface of bonding area of wire prevents slippage. Keywall comes in rolled form (see photo above), can be cut and lapped at corners without increasing the thickness of mortar joints. 150 lin. ft. per roll for 4", 6", 8", 10", 12" wall. Keystone Steel & Wire Co., Peoria 7, Ill.

continued on p. 258

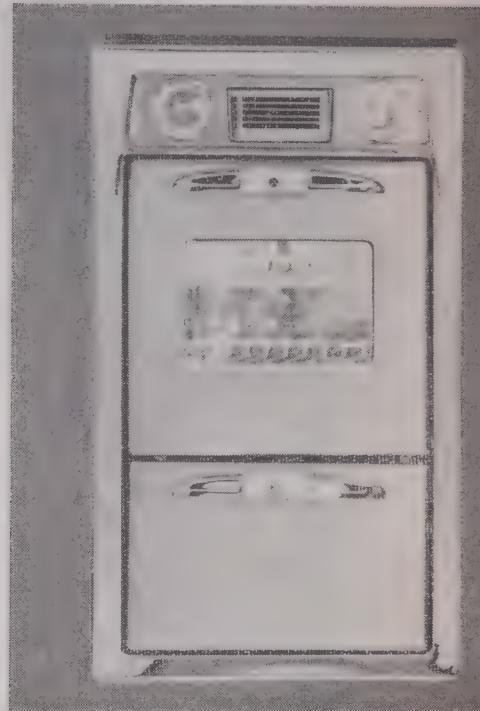
TAPPAN ELECTRONIC range

BUILDER AND SALES CLINCHER!

Only TAPPAN lets your buyers choose gas, electric or electronic built-ins.

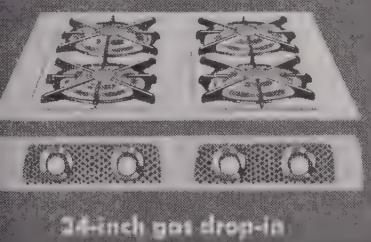
All fit standard cabinets—cut your costs.

Only with Tappan can you please *every* customer. Combine Tappan gas or electric surface units with the fabulous electronic oven . . . or combine surface units with Tappan gas or electric built-in ovens. Units available to fit every plan and price.



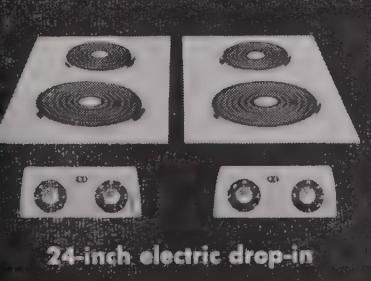
Tappan gas and electric built-in ovens are available with Visualite window or solid doors. Chrome or porcelain oven linings. Lusterloy stainless or porcelain-copper exterior finish. Both gas and electric ovens have separate, roll-out broilers.

Most-wanted gas and electric oven features and finishes

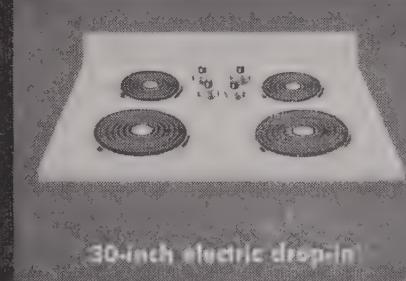


24-inch gas drop-in

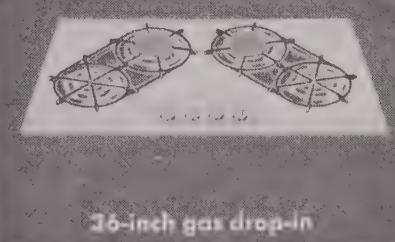
Choice of three gas and four electric surface units



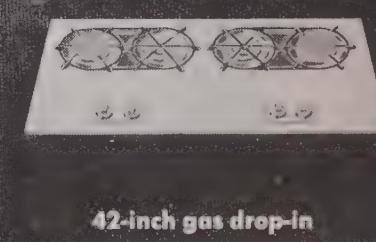
24-inch electric drop-in



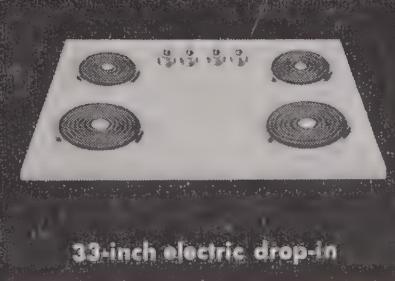
30-inch electric drop-in



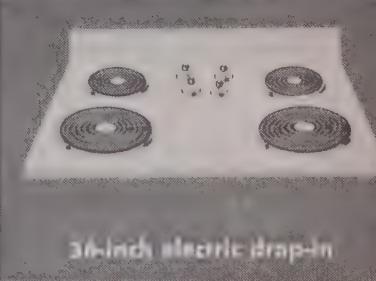
36-inch gas drop-in



42-inch gas drop-in



36-inch electric drop-in



48-inch electric drop-in

Give your kitchens these Tappan features that have made **TAPPAN** the world's fastest-selling BUILT-IN

- Best baking chrome-lined oven
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- Separate roll-out broiler drawer
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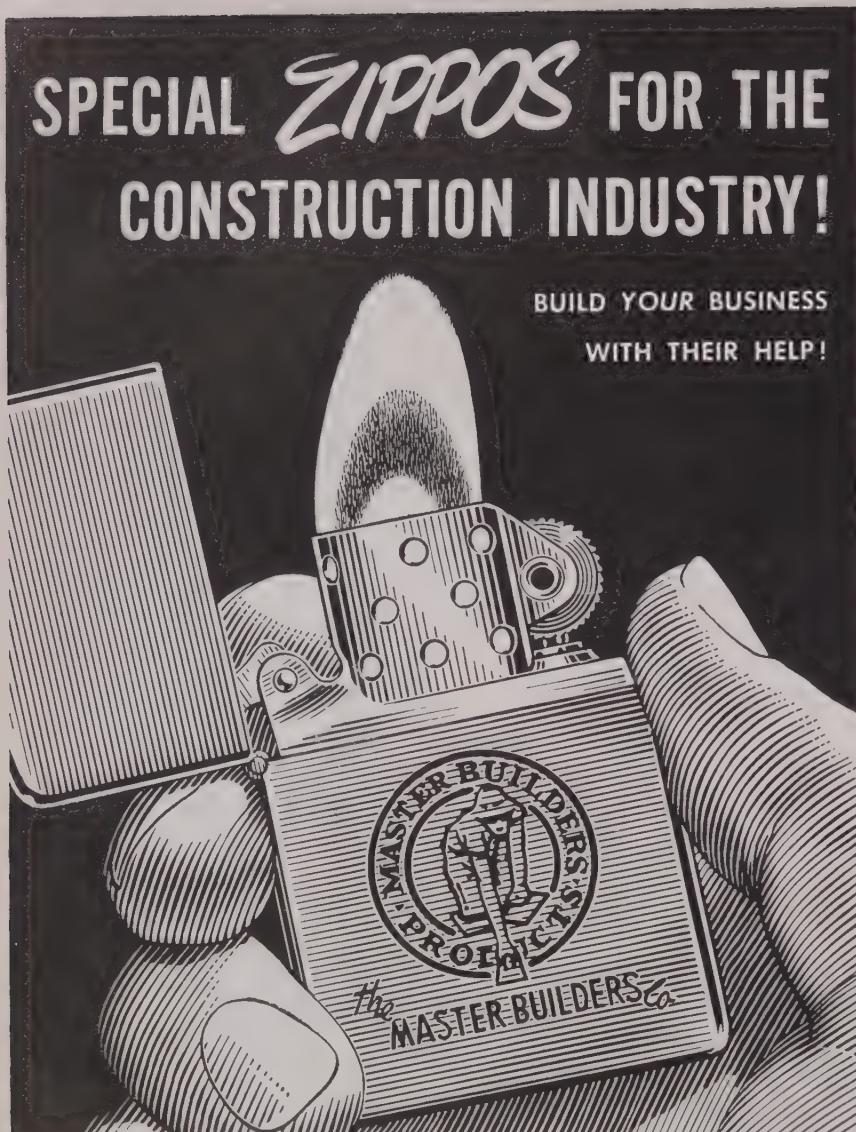
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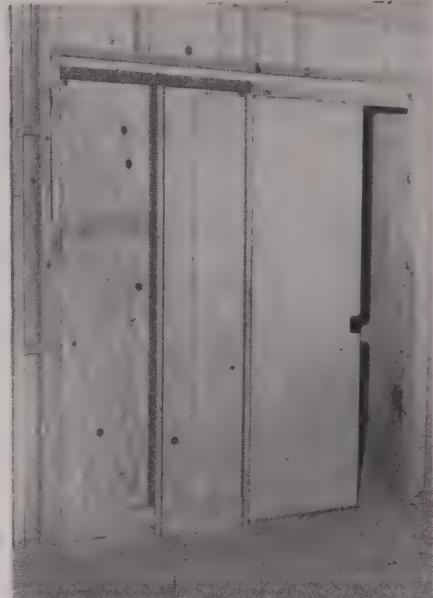
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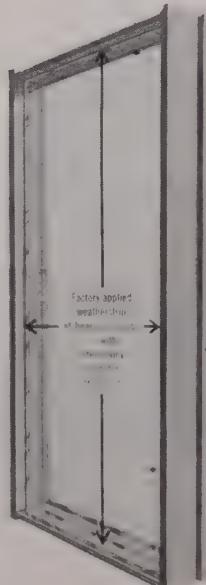
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Firm _____



ee. Kennaframe sliding door pocket is quickly installed. Pivotal connection of jambs to header is one of the reasons, since it permits easy plumbing of front uprights. Removable track slides out for cleaning or replacement without disturbing finished wall. All steel construction, pocket is available in all standard 1 3/8", 6/8 door sizes. Prices from \$33.90 to \$36.90 for 800 series with ball bearing axles; from \$26.75-\$27.50 for 900 series with plain bearings. Kennatrack Corp., Elkhart, Ind.



ff. Weatherstripped door frame is shipped k.d. with aluminum weatherstripping already installed in head and jambs. Frames are made for all standard openings up to and including 3' x 7', rabbeted for 1 3/8" and 1 3/4" doors. Ponderosa pine sills are water repellent, reinforced with fluted and barbed aluminum extruded strips at nose, tread and threshold. Felt-padded aluminum hook trips interlock with threshold for weather tightness. 3' x 6'8", about \$18. Crestline Millwork, Silcrest Co., Wausau, Wis.

continued on p. 262

steel window Construction Corp.

"FAIR PRICES • DURABILITY • WEATHER PROTECTION

SMOOTH OPERATION • EASE OF MAINTENANCE • PAINTABILITY

TRUSCON SERVICE" . . . preferred by big apartment builder.

Anthony Campagna, President of Campagna Construction Corporation of New York City, has planned, built and owned quality apartments for more than forty years. His lifework is now being ably carried forward by his sons Joseph and John, in New York and St. Louis. They attribute much of their success to careful attention to numerous details—details that contribute to creating distinctive buildings and satisfied tenants.

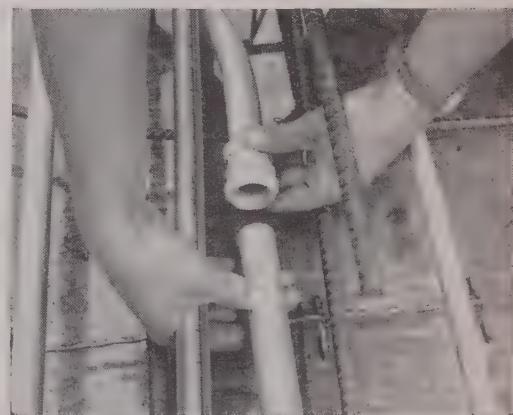
The Campagnas are convinced that proper selection of windows is a very important part of residential structures, especially those with modern, large glass areas. They write, "From time to time, we have considered various types of steel and aluminum windows but our choice in the past fifteen years has invariably been the Truscon Steel Double-Hung."

The Campagnas give these seven reasons for their preference: 1. A fair price. 2. Sturdiness of the frame, which is not subject to distortion or damage during construction. 3. Tight weather protection. 4. Smooth sash operation, with a definite feeling of solidity. 5. No maintenance problem. 6. Their preference for painting the windows to harmonize with exterior color styling. 7. Truscon service.

Take the Campagnas' tip. Investigate the Truscon Series 138—the largest selling steel double-hung window on the market. More details in Sweet's File; or return coupon below for your personal copy of specifications, details, types and sizes.

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Republic ELECTRUNITE® "Inch-Marked"® E.M.T. . . . the original lightweight rigid steel raceway. No lines to turn since every joint is a union. Exclusive features include "Inch-Marking" and Guide Line on the $\frac{1}{2}$ ", $\frac{3}{4}$ ", 1", and $1\frac{1}{4}$ " sizes; Inside Knurling for easier wire pulling on the $\frac{1}{2}$ ", $\frac{3}{4}$ " and 1" sizes. Threadless, compression-type couplings and connectors provide concrete-tight joints. ELECTRUNITE E.M.T. is approved by the National Electrical Code for open, concealed and concrete construction. Write Republic.



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December 13, 1955

Truscon Steel Division
Republic Steel Corporation
Attention Mr. William H. Hunt
48-18 Northern Boulevard
Long Island City 1, N.Y.

Dear Mr. Hunt:
This is in response to your inquiry . . .
For me . . .

Anthony Campagna
Anthony Campagna, President
Campagna Construction Corp.

AC 401

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REPUBLIC STEEL CORPORATION
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Please send me more information on:

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 Republic ELECTRUNITE E.M.T.

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Van-Packer Chimney blends with all homes. Note how the housing harmonizes with brick trim of home above.

Only Van-Packer Chimneys give permanence of masonry plus economy of pre-engineering

You can be sure of chimney safety and permanence—and enjoy the savings of a pre-built product—when you specify the Van-Packer Packaged Masonry Chimney for the homes you build. Van-Packer flue sections have $\frac{5}{8}$ " fire clay tile liner, 3" vermiculite concrete insulating wall, cement-asbestos jacket.

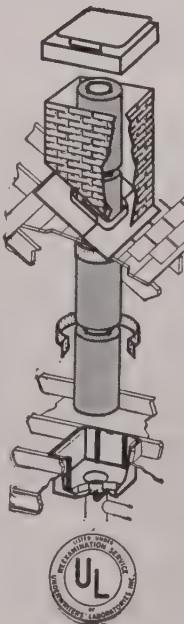
Completely packaged including flashing, the Van-Packer Chimney goes up in 3 hours or less and saves you 20-40% over brick.

Brick-panel housing adds beauty to all homes, assures buyer acceptance. Housing is now available in a choice of colors—red, buff or white—at no extra cost.

Ceiling or floor suspended Van-Packer saves space, lets you locate furnace anywhere. Van-Packer Chimney gives greatest draft for best furnace operation.

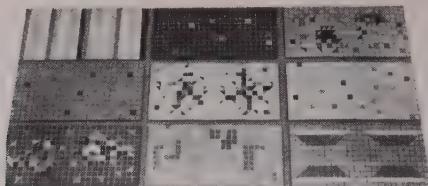
UL listed for all fuels, for all home heating plants and incinerators; approved by major building codes.

Immediate delivery to job from your local heating jobber or building material jobber. See "Chimneys—Prefabricated" in yellow pages of classified phone book, or write Van-Packer Corp. for Bulletin RS-1-19.

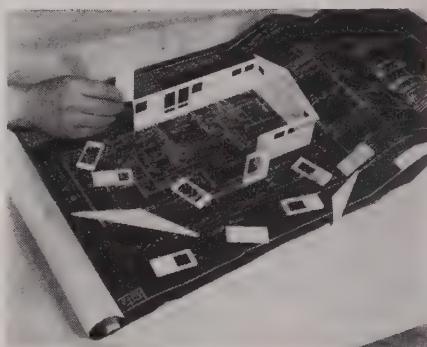


Van-Packer PACKAGED MASONRY **Chimney**

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gg. Cambridge Tile has added a bright galaxy of contemporary patterns to their Suntile line. Designed by ceramic muralist Max Spivak, each pattern is made up of 1" square unglazed tile mounted on regular 1'x2' paper sheets for quick installation. Nine basic motifs can be combined in different ways, used with standard Suntile line. Above, top: Pencil Stripe, Walnut, Birds in Flight; middle: Birch Static Buckshot, Cock Fight, White Granite Static Buckshot; bottom: Tropical Fish, City Plan, Hour Glass. The Cambridge Tile Manufacturing Co., Cincinnati, Ohio.



hh. "Demonstrate your home in miniature" with the model kit shown above. The white plastic building parts you see on the blueprint above are AMM developed to demonstrate the exterior of almost any one-story house. Miniatures are scaled $\frac{1}{4}$ " to the foot and based on modular construction. The kit is easy to use. Wall parts are interlocking, easily joined by built-in dovetail joints. Panel parts can be separated again for rearrangement or reuse on another project. Basic parts are identified by either a letter or number. Among the parts: gable section, picture window opening; window opening in three sizes, door opening, solid wall panels, special wall panel for functional purposes, three corner posts for various wall connections. The particular model shown was designed for retail lumber dealers to demonstrate the Lu-Re-Co panel system and modular home construction. Kit is particularly useful since it is a visual selling aid for prospective customers, gives them a complete picture of how their home will look before actual building ever begins. Kit above contains over 175 parts; you can purchase additional parts to add to the kit as you need them. Folder comes with kit, contains directions for using parts, shows you how to determine roof span and roof pitch for gables. Each kit, \$27.50. Ten or more kits cost about \$22.50 each. National Plan Service, Inc., Chicago 22, Ill.

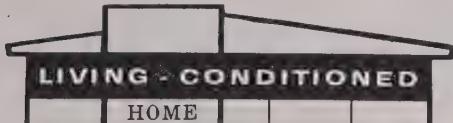
Technical Publications on p. 266

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In recognition of good architectural design, skill in achieving economies in plan, design and equipment, and for meritorious design reflecting suitability and adaptability for a home builder's development.

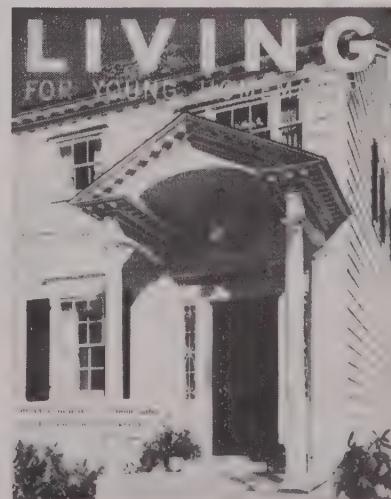
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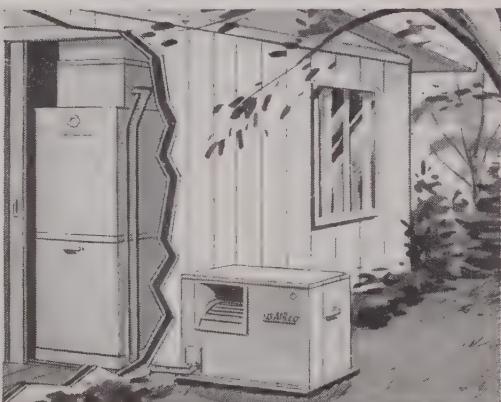
building in water shortage areas?



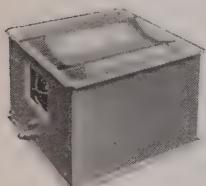
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residential air conditioners*

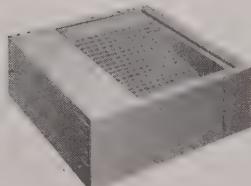
The modern trend is to usAIRco Kooler-aire because it operates on electricity only . . . eliminates water supply and disposal problems! It consists of 2 parts: an air-cooled condensing unit, which is usually located outdoors, connected by copper tubing to a housed cooling coil. Kooler-aire occupies very little space inside of the home. All usAIRCO packaged air conditioners are fully warranted and realistically priced.



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V-type cooling coil section for placement on outlet side of low-boy and hi-boy warm air furnaces.



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Horizontal air-flow cooling coil section fits easily into main duct trunk.



Coil-blower set is easily installed in homes that do not have central heating systems. All components available in sizes from 2-7½ hp.

for further details write John T. Craig

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GARAGES

456. Overhead garage doors. Magic-Lift Sales Corp., Dept. HH, 965 Center St., San Carlos, Calif. 4 pp. folder.

Magic-Lift doors with built-in safety features, wide design selection. Folder describes doors, hardware, automatic controls, and all the special features.

457. You get so much more with a Graham door. Graham Industries, Inc., Dept. HH, 6901 Carnegie Ave., Cleveland. 4 pp. Style and design to harmonize with house architecture, to lend texture and pattern to the garage. Doors are pre-engineered for electronic, motor-operation.

458. How to plan your garage. Crawford Door, Dept. HH, Detroit, Mich. 20 pp.

A design book that takes up the questions of size, storage, driveways, paving and shows decorator doors and Crawford hardware with adequate descriptions of each.

KITCHENS, BATHS

459. Planning and decorating the dream bathroom. Universal-Rundle Corp., Dept. HH, New Castle, Pa. 20 pp.

Bright color, interesting plans and, of course, U-R fixtures give you a wealth of ideas for new bathrooms and show you how to remodel some old ones handsomely.

460. Trend setting kitchens. Revco, Inc., Dept. HH, Deerfield, Mich. 16 pp.

Revco built-ins with notes from builders and decorators about the importance of color and convenience in the kitchen. Plans and photographs point up some excellent ways to transform kitchens.



461. Mengel Cabinets. The Mengel Co., Dept. HH, Union City, Ind. 12 pp.

Crestwood and Mengelwood cabinets—the first in platinum birch only, the second in natural birch, white, five colors. Storage features, cabinet sizes, hardware.

* Clever Kitchens. American Kitchens, Dept. HH, Connersville, Ind. 24 pp. 35¢. Kitchen styles, equipment, storage, cabinets and countertops, accessories, plans. In short, kitchens—from top to bottom.

463. Armstrong floors, walls and counter tops. Armstrong Cork Co. Dept. HH, Lancaster, Pa. 48 pp.

Plastics, linoleum, tile, wall and floor coverings in a galaxy of colors and designs for application all over the house. Installation and specification data.

continued on p. 270

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REYNOLDS Lifetime ALUMINUM

Gutters and Downspouts

Flecker-LaBeau, Inc., have built hundreds of "Blue Ribbon Homes" featuring economical design and quality construction. Read their letter carefully...it proves what Reynolds *Lifetime* Aluminum Gutters mean both in quick-sale value and in permanent customer satisfaction.

Few other features you can specify make such a big impression at so little cost. The soft white gleam of aluminum at the eaves

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BUILDERS TYPE REYNOLDS ALUMINUM REFLECTIVE INSULATION

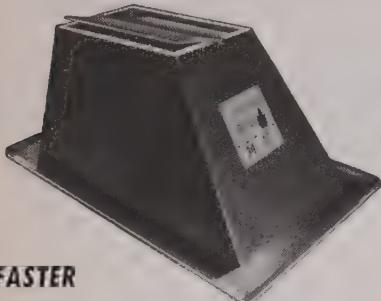
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Builds ALL 6 Basic Opening Types

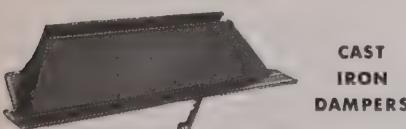
No matter which fireplace type you are building... projecting corner, 2 sided or 3 sided openings, openings in 2 rooms, open all around, etc.—Beneform will build it *better*—and at *lower* cost. Thousands of successful installations and our years of fireplace specialization are your assurance of complete satisfaction...

Six Stock Sizes Available...

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471. Distinctive roof applications. Red Cedar Shingle Bureau, Dept. HH, 5510 White Bldg., Seattle, Wash. 6 pp. folder.

Five roof application ideas for cedar shingles that can't help but put fresh, distinctive design on your roofs. Dutch Weave, Thatch, Ocean Wave, Serrated and Pyramid roofs give ideas of texture.

472. Catalogue 255. Morgan-Wightman Supply Co., Dept. HH, 1541 Salzman Ave., St. Louis 20, Mo. 96 pp.

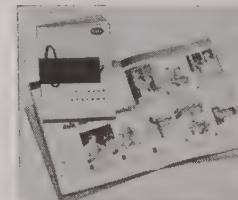
The big order book of products. You'll find locks, hinges, ornamental iron, doors, closet hardware, power tools, kitchen products, fans, ventilators, all kinds of hardware.

473. Specifications for metal lathing and furring. Metal Lath Mfgs. Assn., Dept. HH, Engineers Bldg. Cleveland. 16 pp.

Specifications for solid and hollow partitions, wall furring, metal lath attached directly to wood supports, contact, furred and suspended ceilings, beam and column protection for fireproofing and reinforcing for exterior stucco.

474. Heavy press extrusions. Kaiser Aluminum, Dept. HH, 1924 Broadway, Oakland 12, Calif. 24 pp.

Brochure designed to aid purchasing, production and engineering personnel. Some information on two new 8,000 ton presses, how they operate, capacities, etc.



475. Copper drainage systems. Northern Indiana Brass Co., Dept. HH, Elkhart, Ind. 20 pp.

A primer on drainage system, types, traps used. Step-by-step procedure in installing copper system. Tube fittings, pictures, descriptions. Glossary of terms.

476. Precast concrete floor and roof system. Flexicore Co., Inc., Dept. HH, 1932 E. Monument Ave., Dayton, O. 8 pp.

Detail drawings and design data illustrate structural, finish, electrical, heating and plumbing details. Typical installations, simplified erections, job savings and specifications included.

477. Hypalon synthetic rubber. E. I. DuPont de Nemours & Co., Dept. HH, Wilmington, Dela. 8 pp.

Composition and manufacture of Nypalon with its performance characteristics, a word about how to obtain rubber products with greater resistance to deterioration. Examples of use.

478. Catalogue No. 55. Chicago Latrobe, Dept. HH, 411 W. Ontario St., Chicago, Ill. 52 pp.

Tools and dimensions—among them, drills, continued on p. 278

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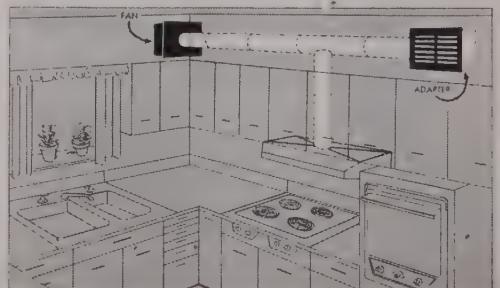
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Wherever obvious quality is essential and basic dollar counting a necessity—a Broan Motordor Fan is your first choice for a kitchen, especially a built-in kitchen. Here *one* Broan fan with economical stove pipe ducts and adapters can do the work that two fans should otherwise be called on to do. This innovation—and one application is illustrated here—provides effective ventilation for the kitchen. It upgrades the value of your work, just as the Broan Motordor upgrades the service of the fan. When the motor is turned on, the door opens automatically... and it closes automatically when the motor shuts off... a patented feature that fascinates all homemakers.

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Broan makes a complete line of fans for residential and commercial applications. See Sweet's file for 1956—or write for a free catalog.

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Ray Alexander, Partner

**"Westinghouse enabled us to sell air-conditioned homes
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Sol Goldstone, Partner

**"The Westinghouse reputation plus their superior units
cinched it."**

"We've had a lot of favorable experience with Westinghouse. Naturally we were receptive to their air conditioning story. They proved that the quality and value built into these units is unbeatable. We're convinced that our home buyers are going to be *more* satisfied with Westinghouse Year-Round Air Conditioning as part of their homes. We built our business on satisfaction. We want to keep building that way."



Fabian Alexander, Partner

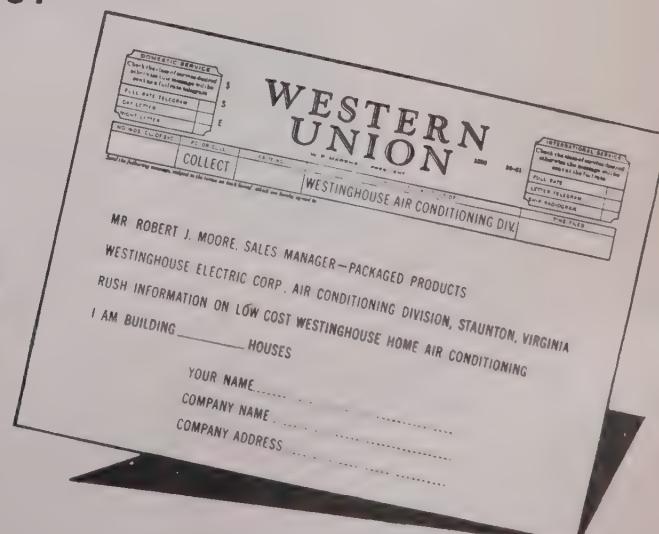
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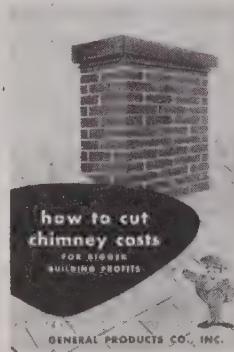
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reamers, carbide tools, power bits, wood bits, lathe centers, sleeves, router bits, helpful facts about certain tools.



479. 1956 Catalogue. Goldblatt Tool Co. Dept. HH, 1960 Walnut St., Kansas City, Mo. 80 pp.

More than 1,100 tools for the following trades: brick, block and stone masonry, plastering, cement finishing, ceramic tile setting, lathing, tuck-pointing and dry wall application. Color this year, too.



480. How to cut chimney costs. General Products Co., Inc., Dept. HH, Fredericksburg, Va.

Booklet points up the extra profits to be made in using packaged chimneys. Complete descriptions of Air-Jet packaged chimneys, job-tested facts on ways to eliminate operations in chimney construction, save on materials, cut down time.

481. Modern sheet copper practices, Manual C-1. The American Brass Co., Dept. HH, Waterbury 20, Conn. 112 pp.

Spiral-bound book with detail drawings in perspective, each with its own specification. Suggested practices for roofing, flashing, expansion joints, gutters, through-wall flashing, spires, domes, etc.

* Pressure treated timber foundation piles. American Wood Preservers Institute, Dept. HH, 111 W. Washington St., Chicago, Ill. 66 pp. \$1.

Case histories about pile driving formulas, means for determining safe loads, how to solve uplift and lateral force problems, protective devices for use during driving. Other sections on basic building codes, specifications, standards, etc.

483. Moldings and trim. Architectural Woodwork Institute, Dept. HH, 332 S. Michigan Ave., Chicago 4, Ill. 8 pp.

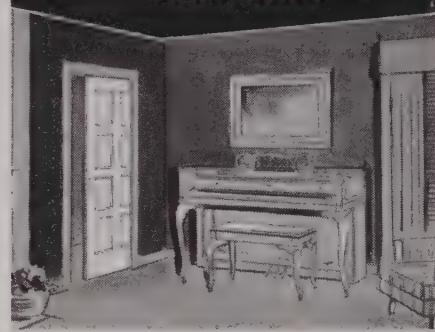
The eighth in a series of brochures for architects with recent installations, descrip-

continued on p. 282

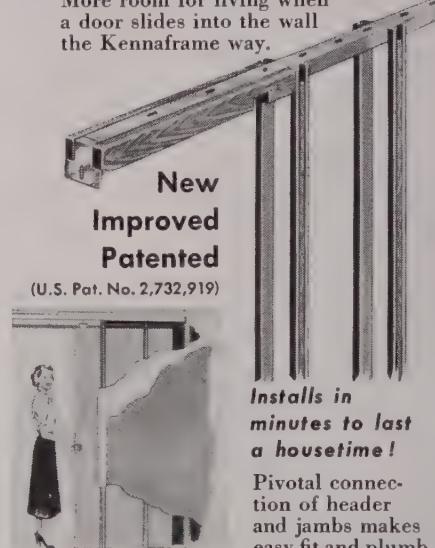
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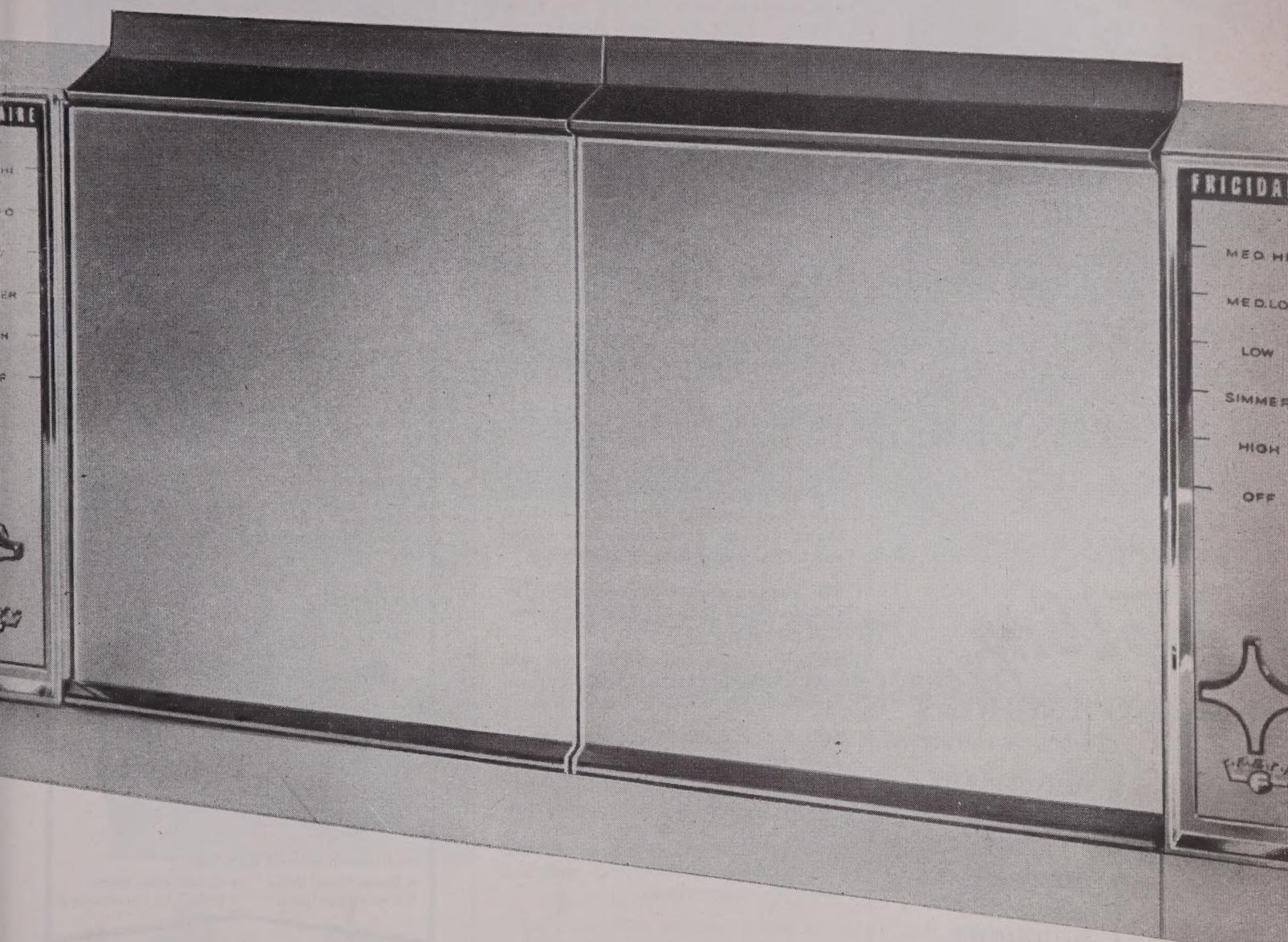
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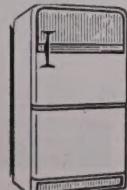
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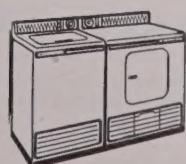
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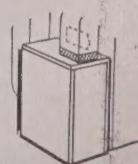
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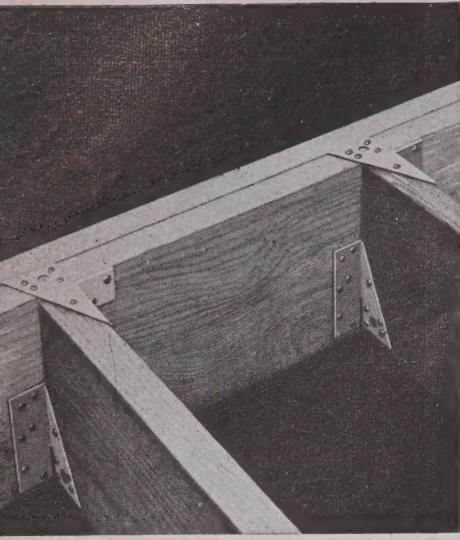
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tions of how special moldings are made, design and specification guides.

484. Resilient floors. AIA file No. 23-G, Armstrong Cork Co., Dept. HH, Lancaster, Pa. 36 pp.

Technical data about resilient floors, performance characteristics, light reflectivity, gauges, specifications, underlaying, adhesives, maintenance.

HEATING, AIR CONDITIONING

485. Residential year-round air conditioning manual. Frigidaire Div., General Motors Corp., Dept. HH, Dayton, O. 98 pp. Fundamentals, building construction, load determination, types of systems, selection and installation, servicing, costs—in a big informative book larded with charts, illustrations, graphs.

486. Air handling units. Drayer-Hanson, Inc., Dept. HH, 3301 Medford St., Los Angeles 63, Calif. 40 pp.

Reference guide for architects, engineers and air conditioning contractors. Data on company's large air handling units. Charts and tables, graphs, size selection.

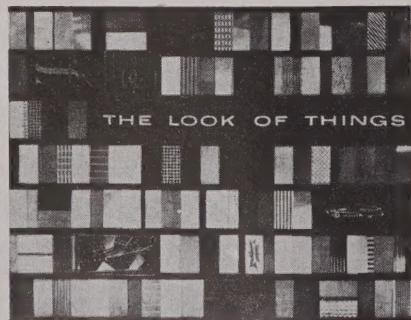
487. Heating and cooling equipment. The Coleman Co., Inc., Dept. HH, Wichita, Kan. 32 pp.

Blend-Air heating and cooling—how units work, installation data and diagrams, parts, equipment, charts and specifications.

488. Radiant heating construction. A. M. Byers Co., Dept. HH, Box 1076, Pittsburgh, Pa. 8 pp.

Sketches of types of radiant heating construction, recommendations, position of coils in concrete slab, relation of coils and slab to structural features of on grade and above grade construction.

MISCELLANY



489. Styling—the Look of Things. General Motors, Dept. HH, Detroit 2, 74 pp. A casebook of reminiscences into the past and a look into the future from the standpoint of the "stylist" or the industrial engineer—the man who designs so many of the products you market today.

490. Panelfold doors. AIA file No. 16-M, Dept. HH, 122 June St., Dayton, O. 8 pp. Wood accordion-fold doors with photographs showing installation in commercial and residential construction. Details, specifications, standard and custom finishes.

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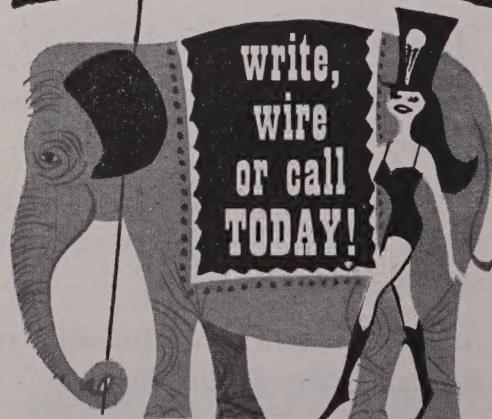
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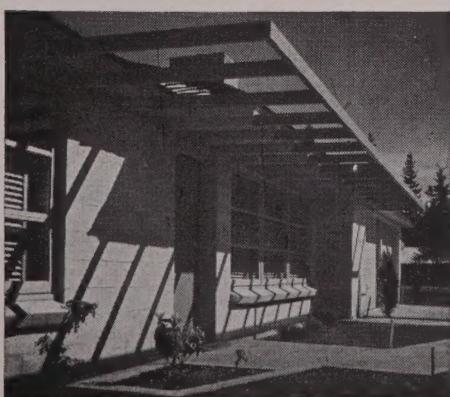
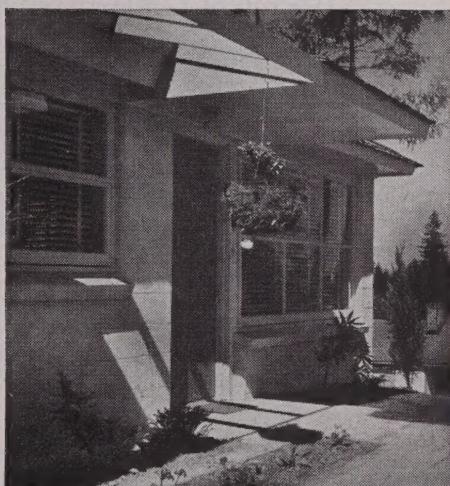
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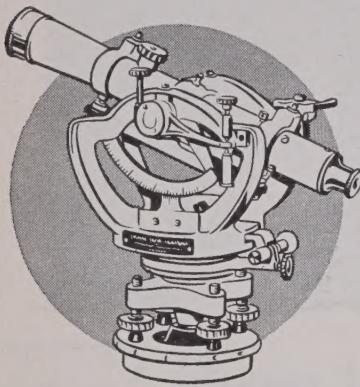
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specifications, standard and custom finishes.

491. Color styling kit. The Arco Co., Dept. HH, 7301 Bessemer Ave., Cleveland, Ohio. 32 pp.

Alkyd exterior housepaints in a swatch book showing a range of colors. Application directions, color styling guides, specification bulletins. Optonic colors for interiors.

492. Tapered Tightness. Timber Engineer-

ing Co., Dept. HH, 1319-18th St., N.W., Washington 6, D.C. 4 pp. folder.

The Teco wedge-fit split-ring timber connector which gives you tapered tightness in timber joints of roof trusses.

493. "Air Infiltration Through Weatherstripped and Non-Weatherstripped Windows." Weatherstrip Research Institute, Dept. HH, Box 101, Riverside, Ill.

Results of a research project conducted by U. of Minnesota and WRI, for architects, engineers and contractors.

PRODUCTS AND PUBLICATIONS COUPON

For more information on new products and publications in this May issue check key numbers below and mail to:

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- ee. Kennatrack sliding door pocket.....
- ff. Crestline weatherstripped door frame.....
- gg. Cambridge Tile designs.....
- hh. National Plan Service model home kit.....

- 456. Magic-Lift garage doors.....
- 457. Graham doors.....
- 458. Crawford doors.....
- 459. U-R bathrooms.....
- 460. Revco kitchen ideas.....
- 461. Mengel cabinets.....
- 463. Armstrong floors, walls.....
- 464. Corning Glass.....
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- 466. Markel Electric fixtures.....
- 467. Lightolier lamp catalogue.....
- 468. Du Pont Lucite.....
- 469. Finland House lighting.....
- 470. Southern Pine technical bulletin.....
- 471. Red Cedar roof applications.....
- 472. Morgan-Wightman tool catalogue.....
- 473. Metal Lath specification book.....
- 474. Kaiser Aluminum heavy press extrusions.....
- 475. NIBCO copper drainage systems.....
- 476. Flexicore precast concrete.....
- 477. Du Pont Hyponal.....
- 478. Chicago Latrobe catalogue.....
- 479. Goldblatt Tool catalogue.....
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- 485. Frigidaire air conditioning manual.....
- 486. Drayer-Hanson air handling units.....
- 487. Coleman Co. heating-cooling equipment.....
- 488. A. M. Byers radiant heating construction.....
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